Work Organisation and The Restructuring of the Telecommunications in British Telecom and Korea Telecom

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DECLARATION

This is to declare that

- I am responsible for the work submitted in this thesis.
- This work has been written by me.
- This thesis has not previously been submitted for a degree at any university.

Signature:_____.

Date:_____.

ABSTRACT

The aim of thesis is to address the issue of convergence versus divergence in work organisation in the telecommunications industry in Britain and Korea through a comparative case study. Convergence or divergence has been debated among universalists, national institution theorists and converging divergence proponents. These approaches suffer from respectively under-socialisation, over-socialisation, and a lack of dynamic interactions between variables.

By focusing on the changing processes of national telecoms governance regimes, management strategies, corporate restructuring, and work organisation, the research explores how global forces are mediated or structured by contextual variables and how variables interact. It investigates three aspects of work organisation, that is, work control, work rationalisation and customisation, and flexibility, of field technicians and customer services representatives in British Telecom and Korea Telecom.

The evidence based on interviews, documentation and observations suggests that there are systematic differences in patterns of work organisation between the two cases but small similarities. Even ostensible similarities arise from different contexts and have varying significance. Systematic differences are argued to result not just from varying phases of corporate restructuring between the two cases but also more importantly from such contextual factors as national systems, telecoms governance regimes, the existing management structure, and management and union strategies. However, the relationships between intermediate variables are more interactive and dynamic than conventional institutionalism suggests. Changes in some of the intermediate variables or work reorganisation may be an important source of influence on national institutions, leading to dynamic interactions between variables. These dynamic interactions make the diversification between the two cases distinct from conventional national institution theories which see national institutions as being constant.

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ABBREVIATIONS

ACD: Automatic Call Distribution which is an old computer system

ADSL: Asymmetric Digital Subscribers' Line

ALT: Automatic Line Testing

AVS: Automatic Voice System

BCD: Business Communications Division - created in 1991 in order to provide services for business customers and later divided into NBC and GC

BD: Business Division - created in 1997 in BT and its predecessor was NBC.

CAS: Customer Account Service is part of CSCs - dealing with more complex work such as sales, home movers and intensive user

CD: Consumer Division - created in 1997 in BT and its predecessor was PCD.

CHT: call handling time – average time for customer service representatives to take a call from the customer, the most important measure of monitoring or driving up productivity in CSCs.

CRUs: Customer Reception Units – customer service organisation before CSCs in BT

CRCs: Customer Reception Centres– the previous name of CSCs in BT.

CSCs: Customer Service Centres - '150' CSCs, '151' CSCs for residential customers, '152' CSCs, '154' CSCs for business customers in BT. They are also called call. centres.

CSDU: Customer Service Delivery Unit - providing customers with installation and fault repair services in BT.

CSIP: Customer Service Improvement Programme - whose aim was to get field technicians to work weekends and evening hours and to restructure field management structure.

CSRs: customer service representatives, normally called 'Customer Service Advisors' and graded as Customer Officers (COs) in BT, who take calls from customers at Customer Service Centres or take calls reporting faults at fault reception centres.

CSS: Customer Service System, an huge company-wide integrated computer systems with customer data base, comprising a number of sub-systems.

CSTs: Customer Service Teams, created in 1998, a group of field technicians and managers who are in charge of a certain geographical area. There are 107 CSTs across

the country in Britain

CTI: Computer Telephony Integration.

CWU: Communications Workers Union - created in 1995 by merging NCU and UCW

ETG: Engineering and Technical Grades - including TIIB, TIIA, TI, ST and TO in BT.

FDOs: Field Distribution Officers – Senior Technicians who had allocated jobs to field technicians and received report of job closures manually or semi-automatically before Work Manager was introduced.

FEQ: Field Effectiveness with Quality

FMs: Field Managers

GC: Global Communications in BT

GIE: Government-Invested Enterprise in Korea

GBE: Government-Backed Enterprise in Korea

ICIS: Integrated Customer Information System in KT

ISDN: Integrated System of Digital Network

ISRs: International Simple Voice Resalers

KCC: Korea Communications Commission

KTTU: Korea Telecom Trade Union

MIC: The Ministry of Information and Communications in Korea

MoFE: The Ministry of Finance and Economy in Korea

MOT: the Moment of Truth

MPG: Managerial and Professional Grades in BT - MPG 2 – junior managers, MPG 4 – middle managers above the first line mangers.

NBC: National Business Communications in BT

NCU: National Communication Union - the main predecessor of CWU.

NCU(C): National Communications Union (Clerical)

NCU(E): National Communications Union (Engineering)

NI: Number Information – '192' directory service in BT

N&S: Network and Systems in BT - created in 1995 by integrating Worldwide Network and Field Operations(???)

OA: Operator Assistance – '100' or '999' in BT

PCA: Percentage of calls answered within 15 seconds

PCD: Personal Communications Division - created in 1991 in BT in order to provide

services for residential customers

PCG: Personal Contract Grades in BT– senior managers and increasingly middle managers have been put on personal contracts with BT and their pay and conditions are individually negotiated with BT annually.

PPP: Poor Performance Procedures which are supposed to help poor performers enhance their performance but are actually used for threatening people or punishing poor performers.

QTT : Quality Task Time - average time required to undertake a special task.

RBUs: regional business units – a geographical organisation of national business units in charge of field operations. There are 13 regional business units across the country.

RIMS: Repair and Installation Management System in KT.

SLMOS: Subscriber Lines Maintenance and Operation Systems in KT

STE: Society of Telecom Executive - renamed 'Connect' from Jan. 2000– junior and middle managers' and professionals' union.

STs: Senior Technicians – the highest grade in field technician hierarchy who took charge of a range of areas in the past but who are now working at Control centres.

TECs: Telephone Exchange Centres - telephone buildings which accommodated exchanges and various customer service functions in BT.

TIMS: Telephone Installation Management System

TIs: Technician I – middle grade between STs and TIIAs, in charge of some field work in the past but they are doing the same jobs as TIIAs or taking charge of cable gang.

TIIAs: Technician IIA – low grade in field technician hierarchy in the past.

TPMS: Telecommunications Performance Monitoring System

WM: Work Manager.

UCW: Union of Communications Workers - merged with NCU and created CWU in 1995.

UK CFS: UK Customer Field Services in BT - providing customers with installations and fault repair services in the field and later became Customer Service Delivery Unit.

WITHOD: Working In The Hours Of Darkness

WN: Worldwide Network in BT - created in 1991 and was in charge of switching and transmission network.

CHAPTER 1. INTRODUCTION

The aim of this study is to re-examine the relevance of convergence versus divergence in a new global environment through a comparative case study on the impact of global forces on the reorganisation of work in the telecommunications services industry in Britain and Korea. It will aim to establish whether or not work is reorganised in a similar way between British Telecom (BT) and Korea Telecom (KT) by looking at how global forces, a number of intermediate variables and work organisation interact with each other. By seeking to explain why and how convergence or divergence takes place in the telecommunications services industry, it is thus intended to revisit and contribute to the existing theories on convergence versus divergence.

The spectre of globalisation is hovering over our heads. Recent examples of many mega mergers and acquisitions, and Internet frenzies in the world stock markets represent outward signs of the unprecedented degree of intensity and influence of the globalisation phenomenon. At the core of globalisation has been the surge in the information technology industry as the new engine of economic growth, supported by free flowing investment capital moving around the world financial market, seeking high returns. Developments in capital markets in industrialised economies such as Germany, Japan and France have led to a much greater influence of investors on their firms, which is often claimed to be giving birth to a trend towards "Anglo-Saxonisation". Globalisation as the newly emerging phenomenon thus re-ignites the decades-old debate on convergence versus divergence in a new perspective.

1.1. Research Questions and Overall Purpose of the Research

Work or production systems in one country have generally been discussed with regard to their relative economic performance to those in other countries. When Taylorism was heralded as a new efficient production system replacing craft-based small production systems, especially in the USA, production or work systems issues attracted much attention. Braverman's labour process theory which emerged in the first half of the 1970s provided a critical analysis from an academic perspective of how Taylorism reorganises work, controls work, and increases work intensity in order to enhance efficiency. As superior Japanese industrial performance in manufacturing in the 1970s – 80s was believed to have arisen from a specific way of organising production, Japanese production systems have attracted significant attention from around the world becoming the focus of academic research as well as practitioners' learning. Japanese production systems were epitomised by Womack et al. (1990) as the 'lean production' model to be emulated by others if they were to survive in increasingly competitive markets. The 'diversified quality production' system in Germany or the 'socio-technical model' in Sweden was also suggested as alternative production systems to Japanese ones (Streeck 1992a). The introduction of a wave of new technologies, market segmentation and competition, which demands responsiveness and flexibility from producers, raise work organisation issues with regard to the performance of firms. Important issues of work organisation, such as flexibility, teamwork and quality circles are recognised as a key source of competitive advantage for firms (Locke 1995a). The importance of production issues became much greater as restructuring came to be seen as the key to competitive success (Terry 1994: 230). Work systems have increasingly

been recognised as being crucial to performance and competitiveness of firms as well as countries. Production or work systems are implicitly or explicitly supposed to have distinct national character, what they call national systems of industrial production (Appelbaum and Batt. 1994; Djelic 1998).

Traditional industrial relations research has tended to focus on procedural issues or institutions such as collective bargaining and trade unions rather than substantive issues. Despite greater efforts to look at these substantive issues as exemplified in flexibility or Japanisation debates, it does not seem that enough attention has been paid to these issues and that there have been a lot of systematic endeavours to integrate procedural and substantive matters into one industrial relations system. Ideally, substantive issues such as work organisation should be dealt with as an integral part of industrial relations systems in industrial relations research. In particular, changes in industrial relations systems have mostly been discussed in relation to procedural issues, while ignoring the relevance of substantial issues to the changes in industrial relations institutions (Millward et al. 1992; Millward et al. 2000). These substantive issues such as work organisation may be an important source of changes in procedural arrangements in industrial relations. Here these issues should also be explained in relations to those changes.

Work systems have often been analysed at the sectoral level, especially focusing on the car assembly industry. Sectors have been the location in which new technologies diffuse and influence work systems and firms compete against each other nationally and internationally, and the level towards which public policies can be formulated. They are also the interface at which national systems and global forces meet. Sectors lie at the meso-level between the micro-level of the firm and the macro-level of the national

economy. Thus, they may be an appropriate location to test what kinds of change that globalisation brings about in the workplace. Proportionately, the service sector now accounts for well over half of all employment and national gross products in most industrialised countries. So far, however, research into work organisation has disproportionately focused on manufacturing, paying insufficient attention to the service sector.

When we look at work organisation in the telecommunications services industry in the context of globalisation, a number of research questions arise with regard to the relationship between globalisation and work organisation. Does globalisation lead to a cross-national convergence of work systems in the telecommunications services industry? What are the similarities and differences in work reorganisation in the industry between the two countries? How and by what mechanisms does work organisation converge or diverge? How exactly do global forces interact with national systems to bring about work reorganisation? To what extent are global forces shaped or structured by national regulatory frameworks or do global pressures lead to changes in national systems themselves? What roles do the major institutional actors play in these interactive processes? How can we reconfigure the changing interactive relationships between global forces, national institutions, sectoral governance regimes, management and unions, and work organisation in order to explain convergent or divergent outcomes of work organisation?

These questions will be sought to be answered in this thesis by investigating and comparing how work is reorganised in the two cases with reference to three key themes of work organisation, i.e. work control, work rationalisation and customisation, and the flexible use of the workforce. These themes have become core issues of work

organisation in the telecommunications services industry because developments in competition in product markets, coupled with innovation or automation capacities of new technologies, have required telecoms firms to provide their services at ever-cheaper prices and to flexibly respond to customers' diversified demands. Telecoms operators achieve these requirements by reorganising work: that is, by improving how work is designed, scheduled, performed, measured, controlled or rewarded, deciding how work is rationalised, standardised or customised, and how work is flexibly resourced in terms of skill, the number of employees, time and space. This kind of work reorganisation is largely driven by performance considerations (Cappelli et al. 1997: 108). By looking at these core issues and what kinds of change have taken place, we can uncover the main theme, whether or not there is any tendency towards convergence of work organisation as a whole. Through the test of the convergence versus divergence hypotheses, this research will examine 'national effects' or 'industry effects' on work restructuring in the telecommunications industry.

1.2. The Telecommunications Services Industry

The service sector, particularly the so-called 'TMT' industries (technology, media and telecommunications) have been expanding rapidly and leading economic growth in industrialised economies, whereas the relative weight of manufacturing has been shrinking over the years. Since the mid-1980s the telecommunications services industry has shown remarkable quantitative growth and qualitative developments into new service areas in advanced economies. The telecommunications industry has led the information age by providing the infrastructure that carries voice, data and pictures, 'virtually' linking people across national borders and to vast sources of information.

The developments in the telecoms industry have had a significant influence on the production, consumption and distribution of services and goods. Thus, the telecommunications industry has a strategic importance for national economies boosting economic growth and national competitiveness. The industry has undergone a transformation of its product markets and ownership structure under global forces as will be explained in the first section of chapter 5. The considerable changes in product markets and ownership make the telecoms services industry an appropriate location for research into the impacts of globalisation on work organization.

This study is based on a comparative case study of the two companies, British Telecom and Korea Telecom, in two very different national contexts. The two countries differ greatly in terms of the history of their industrialisation, political institutions, financial systems, and industrial relations arrangements, as will be seen in chapter 4. The choice of the two companies in greatly differing national contexts may make the cross-national comparison more pertinent in the sense that it may provide a good opportunity to explore how globalisation influences work organisation in the telecoms service industry.

1.3. The Structure of the Thesis

The thesis is composed of chapters, which broadly deal with the theoretical framework and methodology, the intermediate variables at different levels and the main focus of the research, work organisation issues. Chapter 2 begins by revisiting the convergence versus divergence debate, which is linked with globalisation. Three perspectives (universalism, institutionalism, and converging divergence) are critically reviewed. From the analyses of these various perspectives, dynamic interactions

between global forces, national institutions, major actors and work organisation are suggested. The two possible alternative outcomes of convergence or divergence are hypothesised in the processes of dynamic interactions. The next chapter addresses research methodology. The pertinence of qualitative, case study and cross-national approaches to the research is espoused and the cases for the choice of the two companies, BT and KT and the unit of analysis are set out. The last section of the chapter concerns how interviews, observations and documentation were used for data collection and how the analysis was undertaken.

Chapter 4 produces a brief introduction to, and comparison of, the national institutions in the two countries. It summaries the main characteristics of political institutions, financial systems and industrial relations systems in the two countries with regard to industrial adjustments. It also considers how these institutions may shape and influence reforms in the telecoms governance regimes, management strategies, and corporate restructuring. Chapter 5 examines what kinds of telecoms governance regimes have been created in the two countries in response to global forces. The chapter continues to deal with how new developments in privatisation, deregulation and competition and regulation may constitute sectoral contexts in each country in which management strategies are formed and corporate restructuring takes place. It compares the two telecoms governance regimes and discusses what their respective influences on management strategies, corporate restructuring are likely to be. The following chapter looks into what kinds of management strategies BT has adopted in an increasingly competitive business environment and how KT management has pursued commercialism, whilst constrained by public ownership. It goes on to explore what dimensions of corporate restructuring have taken place under these management

strategies in the two companies and in which ways management strategies and corporate restructuring may be closely linked to work reorganisation. It then compares the two cases and seeks to explain why and how management strategies and corporate restructuring are different between them.

Chapter 7 – 9 deal with three work organisation issues, that is, work control, work rationalisation and customisation, and flexibility in the context of national institutions, national telecoms governance regimes, and management strategies and corporate restructuring. These issues have not only been closely associated with company performance but have also been conspicuous in work restructuring as an essential part of corporate restructuring. These may be considered as important indicators of the extent of the reorganisation of work. Chapter 7 discusses how the two companies have developed work control systems, and explores the management strategies responsible for the kinds of control systems BT and KT have developed. Their consequences and implications are also considered. The comparisons are between the two cases and explanations for differences are sought by contextualising the cases. Chapter 8, after defining work rationalisation and customisation, focuses on how and to what extent work rationalisation and customisation have been advanced in BT and KT. It then discusses the consequences and implications of these work rationalisation and customisation for work systems, and the reasons for the differences found in work rationalisation and customisation between the two cases are explained. Chapter 9 looks at developments in the flexible use of the workforce. Four dimensions of flexibility (task, external, time and space) were identified, and the extent to which BT and KT have used these four dimensions of flexibility is investigated and the reasons for the differences are sought. The last chapter summarises the key findings, similarities and

differences between the two cases and between the access side and the clerical side. It goes on to examine why and by what mechanisms global forces lead to divergent work systems and to explain how dynamic interactions work and how institutional changes may be brought in. It concludes by emphasising the need to integrate institutional dynamism into future IR research and looking at how institutional changes may occur.

CHAPTER 2. THEORETICAL FRAMEWORK

2.1. Revisiting convergence vs divergence debates

The debate on whether a convergence or divergence of industrial relations between countries, sectors and firms has been an ongoing feature of industrial relations research for decades since Kerr et al. (1974) argued that pluralistic industrialism was a driver of convergence. Historically convergence theories that have so far emerged during the course of the debate have material contexts originating from one country but could also have implications for other countries. As Hyman (1989, 123) suggested, Kerr et al.'s model of pluralist industrialism on which it was claimed other societies would converge, reflects the post-war dominance of American political economy based upon the principles of mass production. The Japanese model of 'lean production', which Womack et al. (1990) contend other production systems would need to emulate if they survive in increasingly competitive markets, has also arisen from the context of surging Japanese economic power in contrast to declining American economic hegemony during the late 1970s and 1980s. In this regard it is plausible to argue that the re-emergence of American economic power during the 1990s based on the new information technology in the era of growing globalisation would encourage academics to revisit the debate with a new perspective.

The scale of the globalisation of economic activities following deregulation measures and the opening up of markets across countries seems to have rekindled the debates concerning whether or not national systems have increasingly lost their influence on industrial relations in a different context from that of the time of Kerr et

al.'s research. How changes in a new global economy are connected with national systems, sectors and firms, and thereby employment relations including work organisation need to be viewed in a new way.

By looking back at how the debate on convergence versus divergence with reference to employment relations, particularly work organisation has taken place, the theme can then be approached in a way that is appropriate for the changed environments. The examination of three different perspectives revolving around convergence and divergence debates in industrial relations will now follow.

2.1.1. Universalist Perspective

The universalist perspective contends that cross-national convergent tendencies are based upon fundamental logics, which pervade across countries. The question of how industrial relations systems at national, sector/industry and firm level relate to the global capitalist system was raised in the early 1960s by (Kerr et al 1960). Kerr et al. argued that the logic of industrialisation tends to drive pre-modern societies into increasingly industrial ones towards a form of 'pluralistic industrialism'. Although the different strategies of ruling elites and cultural heritages may remain sources of the continuing diversity in those societies, the diffusion of advanced technology, trades, best practices, trial and error, and mutual accommodation between conflicting interests have had homogenising effects on social institutions including industrial relations systems (Kerr et al 1960: 55, 264 – 9). In particular, the 'iron hand of technology' is emphasised as a main driving force of the convergence of social institutions including industrial relations systems across different countries (Kerr et al.: 259 - 63). In a similar vein, neo-classical economics holds that social institutions interfere with the proper operation of markets

and hierarchies, and are therefore regarded as a deviation from efficiency until such institutional distortions eventually disappear.

However, 'convergence theory' attracted a great deal of criticisms from various scholars who maintain the view that there is a divergence of industrial relations systems among different countries. In essence, the convergence theory of pluralistic industrialism is criticised as being technologically deterministic, ethnocentric and functionalist (Locke 1995a; Valenzuela 1992). The fact that distinctive national industrial relations systems that had been formed as a result of different kinds of post-war settlements remained robust has been found via numerous cross-national comparisons (Ferner and Hyman 1992; Bamber and Lansbury 1993; Frenkel 1993), thereby repudiating the simple convergence theory. The pluralist industrialism theory is also considered as being too functionalist in the sense that it indicated that practices should be understood by reference to their contribution to economic efficiency and social stability. Reflecting the overwhelming power of the American economy over other parts of the world at the time, they implicitly seemed to assume that the institutions and practices of the USA could serve as a best practice model for other nations to emulate. This particular ethnocentrism has been undermined by the emergence of the Japanese 'lean production' model and the radical changes in industrial relations practices in the USA in the 1980s.

Another version of the universalist perspective is espoused by Womack et al. (1990) who, in their study on the world auto industry, identified a fundamental idea of 'lean production' originating from Toyota Motor plc. The principles of 'lean production', they argue, were regarded as being superior to the existing mass production principles in the increasingly competitive world car markets since lean producers have the ability to

reduce costs per unit and to dramatically improve quality whilst providing a wide range of products. Thus,

> "lean production will supplant both mass production and the remaining outposts of craft production in all areas of industrial endeavour to become the standard global production system of the twenty-first century" (Womack et al., 278).

They also argue that lean production principles are universally applicable to all sectors beyond the auto industry. The message that 'lean production' theory sends is very strong: the transition from mass production to lean production is necessary and inevitable in intensified competitive product markets since firms which adopt lean production systems will survive or otherwise be wiped out; and the convergent tendency towards 'lean production' will change all aspects of social life including the nature of work and employment relations (Womack et al., 9-12). The claim is that production systems converge on 'lean production systems'.

More reservedly, there have been discussions concerning the transferability of best practice including lean production or Japanisation in the UK. In their study of Japanese transplants in the USA, Florida and Kennedy (1996, 54) share Womack et al's view by stating

> these organisational techniques and practices can be lifted out of the Japanese context and transferred abroad... Japanese transplants have not adapted to their environment as existing organisational and management theory would have predicted but they rather have effectively transformed their environments to meet their needs and functional requirements.

MacDuffie and Krafcik (1992, 222) and MacDuffie (1995, 1997), in their studies on work organisation in the auto industry, argued that 'lean production is fully transferable to other cultural and national settings', with the direction of change in work

organisation converging towards a 'lean or flexible production model' among countries. Adler et al. (1997, 66-74) state that NUMMI and another Japanese transplant successfully adopted Toyota's production systems but adapted employment practices to suit local conditions. Similarly, in their study of 31 Japanese transplants in Singapore, Rodgers and Wong (1996) argue that work organisation in these transplants conforms very much to Japanese lean production methods. However their HRM practices are held to be similar to those of the host country. Gill and Wong (1998) confirm that the Japanisation of management practices has been most successful in respect of 'hard' practice - production practices such as JIT, Kanban and TQM, whereas there is a greater difficulty in reproducing 'soft' HRM practices (e.g. lifetime employment and seniority systems) in different cultures such as Singapore. Morris and Wilkinson (1995, 727-8), in their analysis of Japanese transplants in the UK, maintain that 'the new paradigm of production and work organisation does travel everywhere with the Japanese', while the three pillars of Japanese employment systems (life time employment, seniority and enterprise unionism) are unlikely to be transferred elsewhere. In most of the case studies above, work organisation represented by 'lean production' systems is argued to have been successfully transferred to Japanese transplants or others in foreign locations.

Womack et al's 'lean production' model has been under heavy criticism from academics as much as it has attracted wide publicity and had strong influence on the business world. Major criticisms concerned the following two points: the transferability of, or convergence of, Japanese lean production systems; and whether lean production is one best practice. The most fundamental critique of both Womack et al.'s lean production model and other writers' argument for the transferability of Japanese work practices comes from institutionalism and the political economy

perspective. Streeck (1996), in his discussion of the transferability of lean production to the German environment, emphasises how production systems are context-bound and inseparably interconnected to their distinct national institutions. His conclusion is that lean production is so deeply rooted in Japanese social institutions that it cannot be transferred to Germany, whose institutions and environment are qualitatively different from Japanese ones. Similarly the 'societal effects' school' sees lean production as a reflection of Japanese national peculiarities. A similar point is made by Ishida's (1997) emphasis on Japanese nation-specific employment systems as 'reciprocal obligations' to support lean production, and Oliver and Wilkinson's remark concerning the vulnerability of Japanese production system arising from few buffers. Juergen et al. (1993, 379-84), in their comprehensive study on changes to work organisation in the auto industry, find that national industrial relations institutions in the US, UK and Germany influence the direction of restructuring and result in cross-national differences. Furthermore, in a comparative study on whether there is a convergence on flexible manufacturing systems in Britain, the USA and Japan, Jones (1991) criticised the ideas of a technology-driven convergence as being intrinsically naïve because there are 'distinct national and local' restraints.

Other critiques emanate from the political economy perspective. Elger and Smith (1994) criticise the universalists including Womack et al. in that they overlook real variations and persistent sources of conflict in the processes of work reorganisation, while Japanisation is actually adopted selectively and unevenly by Japanese transplants in foreign locations or non-Japanese firms. Graham (1994, 124) suggests that management practices at a Japanese transplant in the USA resulted in a range of individual and collective resistance among workers due to the different environment.

Turner and Auer (1994; 57) point out the importance of historical backdrop, which the universalists fail to recognise, but against which the Toyota production system was partly founded following the defeat of independent unionism in the 1950s. Subsequently, Japanese industrial relations has seen docile trade unions play an important part in the development of new work organisation.

There have been some ambiguities in the discussion concerning the transferability or diffusion of lean production systems. Whether lean production is car industry-specific best practice or not is not clear in the light of other research, except Womack et al's argument for the universal application of lean production principles. Whether the supposedly successful transfer of Japanese production systems to Japanese transplants overseas is due to Japanese multinationals' 'corporate isomorphism' (Ferner and Quintanilla 1998) or to the diffusion of lean production as a best practice everywhere is not fully spelt out.[1]

These criticisms take the view that it is quite functionalist and technologically deterministic to argue that there will be a convergence towards lean production or the transfer of Japanese production systems to other countries. Because the argument is built on the assumption that production systems in one country can be separated from national contexts such as national systems, and national specific historical conditions of a compromise between classes at the time when production systems were born, the main point of the critiques is therefore that production systems cannot be de-contextualised.

Another range of criticisms against the lean production model centre around the

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[1] . 'Corporate isomorphism' means that divisions, business units or subsidiaries within the firm, especially the multinational tend to adopt the same structures and processes not only within the home country but also across national borders. The corporate isomorphism is due to strong headquarters pressures for international comformity within the firm (Ferner and Quintanilla. 1998, 713)

question of whether lean production can be seen as 'one best way'. Jürgens at al. (1993) suggest that there are two efficient models of work organisation: the German model and the Japanese model. Turner and Auer (1994) argue that there are different roads to new forms of work organisation with distinctive outcomes and that there is no one superior best way in terms of productivity and quality. Appelbaum and Batt (1994) identify four contending models of workplace reform based on nation-specific contexts, together with two emerging American models, which mean that there are competing models associated with more or less similar levels of high performance. These criticisms are consistent with evidence of national variations on forms of Taylorism significantly modified by national skill structure and employment relations (Lane 1989: 155-6).

Overall, convergence perspectives including Womack et al's lean production model are biased towards a convergence on a context-free best practice, ignoring the effects of national institutions. In the univeralists' view, work organisation is relatively more easily learned, and less embedded in a specific national, institutional context than employment practices are. They think that accelerated globalisation may reduce the influence of national institutional arrangements and increase both the importance of managerial strategies and the possibility of management's adoption of best practice in the 1990s. However, global forces and best practice such as lean production would be mediated by, and interact with, national institutions to be modified in a nationally specific form. Work within firms in a certain country may be reorganised in a nationally specific way under constraints or pressures of global forces, depending upon contingencies such as the denseness of national institutions concerned, the extent of competition, and sectoral characteristics.

2.1.2. National Institution Approaches

Industrial relations was often regarded as the study of social institutions. Common features of institutional theories contain strong critiques of neo-classical analyses that emphasise market mechanisms, and also address the defining roles of distinctive national institutions in influencing the forms and character of industrial relations including work organisation. National institution approaches seem to have emerged as a reaction against 'convergence theory', particularly pluralistic industrialism and Marxism. According to the theories, capitalist systems and market relations have a nationally specific nature. There are a number of different institutional perspectives on work organisation and industrial relations: societal effects school, national business systems theory, and new institutionalism.

The 'societal effects' school (Maurice, Sellier and Silverstre 1986; Maurice and Sellier 1979) tends to emphasise cross-national systemic differences rather than similarities in industrial relations systems by noting the resilience and continuity of organisation that is deeply rooted in a web of social relations. Stability and continuity are considered to be due to 'interdependence' between various dimensions of social relations (training, worker mobility and status, hierarchical relations, the distance between manual and non-manual jobs, and industrial relations). According to 'industrial order' theory (Lane 1994), cross-national differences outweigh similarities between countries and the 'order' is held to be caused by 'mutually sustaining institutional complexes' composed of the state, the finance system, and industrial relations systems. Sorge (1995) also stresses cross-national differences in HR issues and organisation that arise from the 'reciprocal interdependence' among various constituents of national institutions such as organisations, human resource/education, industry, and the labour

market. Further evidence produced by cross-national researches of this school mostly into Britain, Germany and France suggests that consistent differences between these three countries remain even in industrial adjustment, a finding that reinforces the societal effects model.

The view that there are significant variations between national business systems has been suggested by proponents of the 'national business systems' theory (Whitley 1991, 1992, 1999). Here variations in business systems between three East Asian countries, namely Japan, Korea and Taiwan/Hong Kong were held to originate from differences in societal contexts. The distinctive business systems as a form of national institution may explain persistent cross-national differences in the structure and behaviour of firms including how work is organised. Since these business systems are based on a different set of interconnected institutions such as ownership, authority relations, trust and loyalty and political and financial systems, they are not likely to alter without concomitant changes in relevant national institutions. 'Societal effects' theories and 'national business systems' perspectives contribute to the understanding of the interconnectedness among various dimensions of national institutions and social relations by explaining nationally distinctive ways of organising work and corporate structure. However, they are not quite so clear about causal relationships and are criticised as being too static.

Another national institution approach is advocated by Streeck (1992a, 1992b, 1996). He argues that in foreign environments there is formidable institutional resistance to managerial-engineered production systems such as lean production because of 'a range of large institutional arrangements rooted in the fabric of society' (Streeck 1996, 144). Even though the production systems are technically efficient and

economically expedient, they will be significantly rejected or transformed in Germany where there are dense, formalised institutional arrangements comprising the training system, skill structure, the legally binding industry-wide collective bargaining, co-determination and works councils, and the labour market. Elsewhere Streeck shows how German social and industrial relations institutions have constrained a 'downward spiral of collective irrationality driven by individually rational choice' and facilitated the German car manufacturers to adopt upmarket strategies (Streeck 1992a, 29, 169 - 96).

These various national institution theories have revealed that higher economic efficiency in production systems and their associated work systems within one country does not automatically lead to the adoption of a best practice model or any simple emulation from other countries. In other words, market mechanisms do not operate as they are assumed to do, because other social mechanisms such as national institutions based on social relations of production have considerable influence in the processes at the same time. According to these national institutionalists, intra-national homogeneity in industrial relations which 'institutional isomorphism' (Dimaggio and Powell 1983) would bring about is likely to be found regardless of sectors, firms, regions within national borders, whereas cross-national heterogeneity is supposed to persist.[2] National Institution theories also suggest that national institutions are robust, and demonstrate significant inertia in the face of any pressure for changes, due to their mutually interlocking linkages among their various constituent institutions. They explain how national institutions or 'societal effects' create structural limitations upon social actors

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[2] . 'Institutional isomorphism' refers to mechanisms identified by Dimaggio and Powell (1984) whereby organisational homogenisation takes place in the organisational field such as 'industry'

and mediate or modify international pressures. Although national institutionalism contributed to correcting many misconceived assumptions that presuppose that functionally efficient regimes will be automatically emulated by others, it is commonly subject to a number of shortcomings.

National institutionalist analyses are more likely to remain static or 'often walk between institutional constraints and institutional determinism' by focusing on the stability and continuity of national institutions throughout significant economic and social changes (Thelen and Steinmo 1992, 15). On the one hand national institutional explanations do not often capture the 'more detailed picture of substantial changes' in workplace industrial relations such as work organisation but rather give us 'the impression of institutional stability and continuity' (Terry 1989, 198). They often look at procedural continuities in industrial relations, while overlooking substantive changes in work and employment. On the other hand they assume that national institutional complexes have internal integrity and coherence, whereas they disregard a conflictual, contested nature within national institutions that arise from the inherent nature of employment relationships and the global dimension of capitalism (Smith and Elger 1997; Elger and Edwards 1999: 6).

National institutionalism is also said to be 'ahistorical' in that it often ignores the fact that certain national institutions or societal complexes are also largely a product of both economic development and a particular socio-political compromise between classes, for example, a post-war settlement in each nation. Moreover, little attention is paid to the dynamic nature of interactions between variables and the dynamism that may exist within institutions themselves, or which widespread industrial restructuring and

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but can be extended to the level of the society.

global pressures in recent years have brought about. National institutionalist views do not see national institutions as possessing their own dynamism in that 'the same institutions can produce different outcomes over time'. With significant changes in environments in which national institutions are situated, 'previously latent institutions may suddenly become salient, old institutions may be put in the service of different ends or actors' goals or strategies may shift within existing institutions' (Thelen and Steinmo 1992, 16 -8). Too much stress on the constraints of national institutional arrangements on social actors does not allow any room for strategic choice for industrial relations actors. These weaknesses lead onto the recent discussions concerning 'converging divergence'.

2.1.3. Converging Divergence perspective

The debate concerning 'converging divergence' is relatively undeveloped but has evolved from recent empirically-based research, especially into the auto industry and the telecommunications services industry (Katz and Darbishire 2000). First of all, the strongly held institutionalist belief that employment and work systems are more or less homogeneous across sectors and firms within national borders needs examination in relation to the possibilities that there may be variations in national industrial relations and production systems.

The first empirically significant research evidence, which suggests that there are various divergent sub-national systems within a national system, was produced by Locke (1992). Focusing upon the industrial adjustment of the Italian auto industry, he found that local socio-economic factors rather than national institutions were actually shaping behaviour and strategies of both unions and management at firm level in two

Italian auto companies. Based on a more comprehensive research, Locke (1995a), by focusing on local firms and industries with dense networks of associations and interest groups mediating conflicts and diffusing information, again challenges the assumptions of the institutional approaches which emphasise the defining role of national institutions in shaping industrial relations outcomes. These local-networks suggest that there may be internal variations within national economies in terms of industrial relations institutions. The findings have some important implications for the theoretical aspects of comparative industrial relations. That is, there is a need to adopt an approach that focuses on micro-level or meso-level developments and the politics of strategic choice in order to explain variations within nations instead of regarding national systems as the only key unit of analysis. This view is echoed by Katz (1997, 23, 26) via research into the telecommunications service industry across countries. Katz argues that there is 'increased divergence...in employment relations within countries' as well as across countries. The possibility of sub-national systems within countries is also suggested in a comparative study of industrial relations in a number of countries (Locke et al. 1995, 380-1). Others note that cross-sectoral differences in governance regimes (including employment relations) within nation-states arise from specific economic and technological conditions (Hollingsworth et al. 1994, 8).

Contrary to the existing dominant perspectives arguing 'for persistent differences across countries and convergence within countries and companies', MacDuffie (1995, 72) argues that there is 'more convergence across countries and divergences within countries in the auto industry in terms of work organisation'. Locke (1995b) suggests that there are considerable variations both across, and within, national IR systems, though some common patterns of development in employment relations across

countries can be seen in the following areas: the rise of an enterprise focus and the decentralisation of bargaining arrangements; greater flexibility in work organisation and labour deployment; declining union influence; and the growing importance of skills development. The increasingly strong influence of multinationals or 'institutional firms' (Crouch and Streeck 1997, 9) on employment and work relations is also more likely to bring about cross-national 'corporate isomorphism' across the host countries, which in turn implies that there may be intra-national variations and cross-national similarities (Ferner 1997; Ferner and Quintanilla 1998). This line of argument is clearly reiterated elsewhere in that 'the picture that emerges is one of increasing diversity within national systems but of increasing convergence between them' (Ferner and Hyman 1998, xiv). However, the fact that cross-national differences persist is emphasised in all the arguments above.

Converging divergence theory is further developed by Katz and Darbishire's recent work (2000). Looking at the auto industry and the telecommunications service industry in seven countries, they suggest that a "growing divergence within countries and a convergence across countries in terms of employment relations at the same time" can be identified. Cross-national commonalities are suggested to involve the spread of the four different patterns of workplace practices as sub-employment systems, the downward shift in the locus of employment relations and an increase in direct communication. Katz and Darbishire nevertheless reject any simple international convergence or unidirectional changes in employment relations. The key sources of intra-country variations are said to be due to the different policies of implementing work practices such as team systems and contingent pay, a shift in bargaining power in management's favour, uncertainty concerning performance effects of new work practices, and

decentralised management structure.

Even though converging divergence theories addressed above focus on divergence within national boundaries and convergence across countries in employment relations, they also emphasise the continuing crucial role played by national labour markets and industrial relations institutions. Katz and Darbishire identify cross-national differences in employment relations as arising from differing influences of respective national institutions among countries on the degree of decentralisation of bargaining, the degree of commonality of decentralised processes of bargaining, and employee representatives' ability to co-ordinate across the decentralised structure. Converging divergence theorists see more room for management to make a strategic choice in a more decentralised structure.

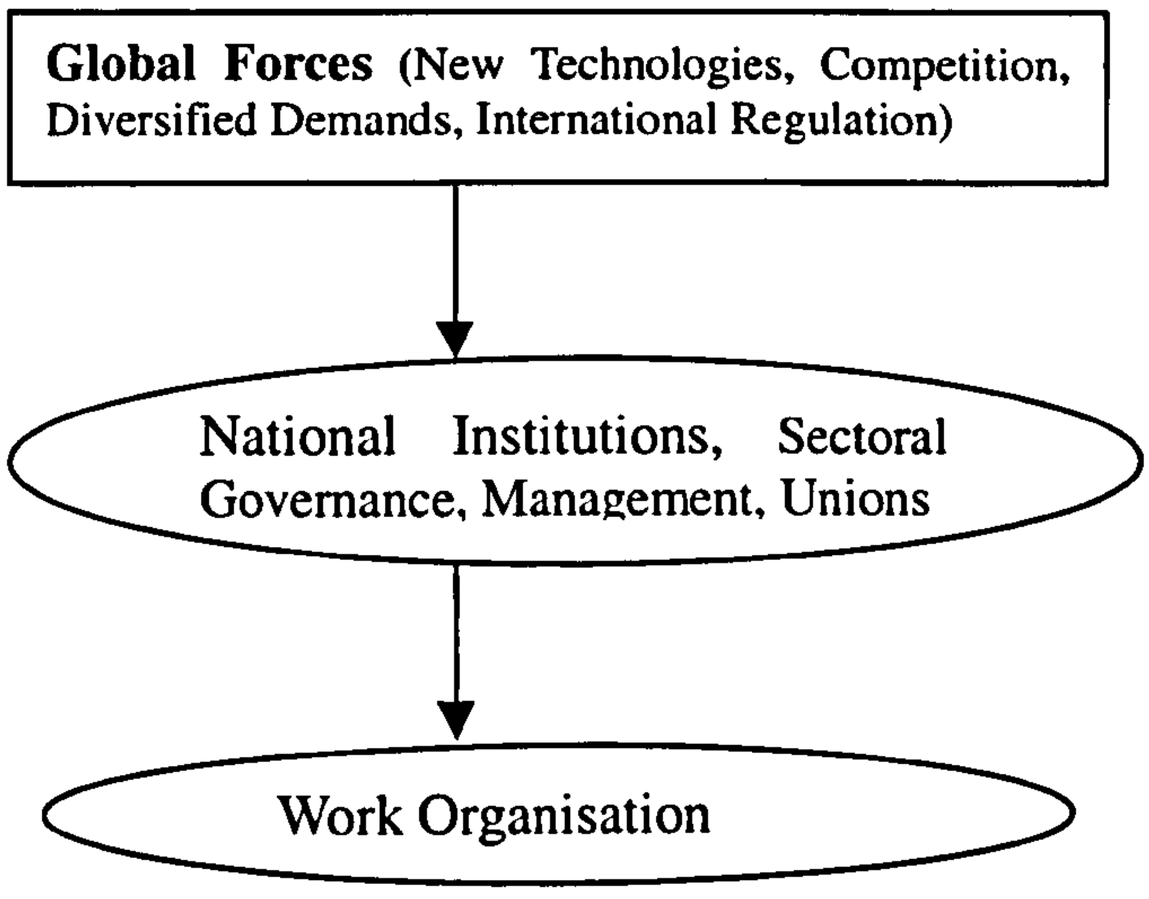
Though the proponents for the converging divergence perspective demonstrate some empirical evidence to support their arguments, they do not appreciate how dynamic interactions between variables take place in the processes of changes in work and employment relations in a more and more turbulent era of globalisation. They do not establish the exact causal relationships between global forces, and work and employment relations outcomes, and other mechanisms of linking causes to outcomes, apart from the decentralisation of collective bargaining. To find such a dynamism, we need to contextualise the cases and to seek the sources of the differences from 'dynamic interactions' between independent, intermediate and dependent variables in the case of each country. How dynamic interactions between variables take place will be considered throughout this thesis and discussed in-depth in the final chapter.

2.2. Theoretical framework: Dynamic Interactions

The three sets of theoretical perspective cited above do not provide satisfactory explanations to recent significant changes in cross-national work and employment relations. Each perspective either focuses on 'dominance effects' (convergence theories) or societal effects (institutional theories), or takes a rather eclectic position between the first two (converging divergence theories). The changes to work and employment relations may reflect more complex and dynamic interactions between global pressures as independent variables and other intermediate variables such as national institutions, sectoral factors and management/union strategies.

As indicated by the title of this thesis, the subject intended to be explored and examined can be generally referred to as employment relations. From the various aspects and dimensions of work relations, we will focus our attention upon work organisation in the two cases. How work has been reorganised, how new work organisation has evolved and what kinds of changing patterns have emerged, during the process of restructuring in the telecommunications industry, will be analysed by referring to the following three aspects: work control; rationalisation and customisation; and flexibility. There are a number of supplementary questions which follow from this. How can we conceptualise the relationships between global competitive forces, national institutions, national telecoms governance regimes, management strategies, union responses and work organisation, bearing in mind the debates concerning convergence vs divergence above? How do variables influence one another? How and by what mechanisms do global pressures bring about the reorganisation of work? Are influences unidirectional from global forces or national institutions to other variables? How can we explain trends or similarities and differences emerging in comparative studies in terms of these relationships? How can we avoid the conventional ways of comparison?

Figure 2. **Simplified Relationships between Global forces, Intermediate Variables and Work Organisation**



Global competitive forces can be seen to be as a driving force, an independent variable that brings about changes in work organisation in the telecommunications services industry. Global competitive forces arise from a number of sources: the worldwide deregulation of the telecommunication industry and subsequently increasing competition among telecoms carriers; newer, more efficient technologies; globalising and differentiating telecoms markets; diversifying customers' demands; and the establishment of international regulatory frameworks. Simultaneously, the privatisation of the former monopolies has taken place in many countries in order to make them more efficient and responsive to market changes. A move to deregulate markets and to privatise state telecoms monopolies has become a worldwide trend. This general trend and recent strategic alliances, mergers and acquisitions among the big telecoms operators are accelerating competition in a more fierce way. Intensifying competition in product markets has been a major driving force helping to bring about the restructuring

of work and employment relations.

Technological innovations have also been instrumental in the recent restructuring of the telecoms industry. Digital switching and transmission technology, optic fibre, wireless technology, and internet technology have had a great impact upon the technical organisation of work and economies of scale and scope. These ever-upgrading technologies with worldwide technical standards have had significant implications for corporate structure as well as work reorganisation. The global competitive forces in the telecommunications services industry have tended to be led by telecoms companies in the USA and the UK that are believed to be more technologically advanced and operate in more competitive situations. Telecoms operators in the USA and the UK may have led to work reorganisation becoming associated with more advanced, efficient production systems than those in other countries. Competition in the sector might exert pressure on telecoms operators in other countries to emulate supposedly more efficient or advanced work practices evident in these two countries.

The exact relationships between global forces, national systems, other intermediate variables and work organisation are not specified in the Figure 2 above. In the face of the growing influence of global forces, national systems may be subject to institutional dynamism resulting from dynamic interactions and this will be discussed in the final chapter. Globalisation may also alter the balance between market forces and social regulation, having reduced the scope for national specific social regulation during the 1980s and 1990s (Hyman 1998). It might make the roles of other variables such as sectors, or firms more prominent than before in relation to national institutions. Especially, changes in sectoral regimes and transformation in substantive issues in industrial relations may be important elements of dynamic interactions which may lead

to institutional changes. The existence of tensions and contradictions between global structural forces and national institutional constraints set in motion dynamic interactions. These dynamic interactions between global competitive forces, national systems, other intermediate variables and work organisation make the current approach distinct from conventional ways of comparison resulting in convergence or divergence. The identification of those dynamic interactions will make the Figure 2 be more precise and complex relationships between variables.

Bearing in mind this approach to comparisons, we can come up with two possibilities of convergence and divergence of work organisation in the telecommunications services industry across countries. Depending on how each variable is related to one another, the Figure will be redrawn accordingly. The two possibilities will be tested on the basis of case study evidence.

2.2.1. The Possibility of Convergence

Following the logic of Womack's lean production model and others who argue in support of the transferability of production systems, work organisation would be separated from national contexts and transferred to other countries. Accordingly, work organisation is argued to be less context-bound than other industrial relations issues. As work organisation is less likely to be subject to local institutions, it is expected that there will be a converging tendency of work organisation across countries over and above that of any other industrial relations issue.

When applying this convergence thesis to the telecoms services industry, it may imply two different developments in industrial relations including work organisation at the same time: a convergence in the same sector across countries and a divergence

between different sectors in the same country. If work organisation across countries proves to be convergent, work organisation would be less likely to be influenced by national systems, even though national institutions, to an extent, shape or influence the process of corporate restructuring in telecoms operators. Then we could infer that sector-specific work organisation may be context-free, transferable to other national environments at least within the same sector. Womack et al.'s convergence argument would have validity as far as work organisation in a sector is concerned.

2.2.2. The Possibility of Divergence

However, there is another possibility. National institutionalists argue that global forces continue to be modified and structured by national institutions. Institutional arrangements are seen as not only shaping the state, management and unions' ends and strategies but also constraining their action by narrowing the scope in which they can adopt their strategies. Institutionalists argue that even though the scope for national regulation might have reduced due to global forces, national institutions still exert significant influence on, and to a considerable extent, constrain or facilitate developments in, certain aspects of work and employment relations. Old management structures, management practices or values and norms of both management and employees may show significant inertia and constrain management in one way or another. Important decisions made in the past still influence the current organisation or work organisation. This path-dependence may also be one factor which may lead to the divergence of work organisation. Thus global pressures may be subject to intervention by national institutions, which would result in quite different outcomes in work relations. If this divergence thesis proves to be the case, work organisation would not

be context-neutral. National institutions would continue to considerably influence the process of work reorganisation, despite increased global pressures. Work organisation would still be significantly dependent upon the paths taken before. Even if there had been cases for the transfer of lean production to other countries in the car industry, they would be viewed as car industry-specific phenomena.

Interactions between global forces, national institutions, management and unions are likely to be dynamic and changeable. By contextualising work organisation issues, the two cases with considerable differences in national contexts can be compared. When we put the issues in this changing context of dynamic interaction, why and how similarities and differences in work organisation occur can be examined more closely.

CHAPTER 3. RESEARCH METHODOLOGY

3.1. Qualitative research

Given the research questions raised, the analytical framework and the hypothesis to be tested, this research aims to put into some context the multiple dynamic interactions among a number of variables and processes. Global structural forces such as new technologies, international deregulation, intensifying competition and newly emerging best practices are set as independent variables, whilst there are a number of intermediate variables at different levels such as national institutions, sectoral governance regimes, and both management and union strategies. The dependent variable is work organization as a consequence of these complex interactions. What we are seeking to establish is not a simple correlation between the two or a number of variables with the direction of causal relationships left unknown. The thesis will attempt to show both how and through what mechanisms independent variables affect the dependent variable, given the fact that the relationships between the independent, intermediate and dependent variable are not clear cut but often ambiguous, interactive and changing. The outcomes may not be clearly differentiated from their various contexts and certain intermediate variables may have significant influences on other intermediate or the dependent variable and vice versa. Relationships between these variables at different levels and the processes are not unidirectional as in mathematical functions but interactive and dynamic in multiple ways over time. In particular, the relationships between intermediate variables themselves may be more interactive and mutually interlocking or reinforcing. As Elger suggests (1990: 71), research tasks to probe 'changes in multi-faceted and conceptually contested features of work organization' cannot be addressed

by quantitative methods such as social surveys or workplace surveys.

Appreciating what these relationships and processes are like and how they work involves looking into what is going on within the 'black box'. Moreover, the tracking of changing patterns in the relationships and work organisation rather than simple snap-shot description of the current situation, and the knowledge of what has brought about such changes, require a historical approach. These interactive, changing, and multiple levels of interrelations and processes cannot be easily quantified. The research into these un-quantifiable social processes and relationships requires qualitative analysis. Changing intertwined relationships between each variable and the multi-faceted nature of work organization can only be understood through analytical inferences based on more informed and in-depth research methods. Any significant differences between ostensibly similar phenomena in the different contexts may then be appreciated. The appropriate research strategies for examining them justify adopting a qualitative approach. The qualitative research strategies will be implemented by adopting a comparative case study approach.

The next section will aim to identify the research strategies, given the research aims. The unit of analysis and case selection are also dealt with in the following section. The last section will consider methods of data collection and analysis.

3.2. Research Strategies

3.2.1. Case Study Approach

The case study is an appropriate approach to this research because its usefulness is in attempting to 'understand or explain the phenomena by placing them in their wider context' (Kitay and Callus 1998: 103). Given the research questions and the analytical

framework suggested earlier, questions of 'how' and 'why' work is reorganised, over which the research has little or no control can be best addressed by case studies which examine the social processes and causal relationships between a number of variables (Yin 1994: 9). The case study approach helps us understand complex and dynamic interactions between national arrangements, sectoral regimes, management strategies and work reorganisation in a holistic perspective. This approach also enables us to explore the processes of changes in corporate structure and work organisation and to examine the dynamics involved in those interactions above. Differing from outcome-centred research, this process-led approach may reveal various mechanisms whereby work reorganisation is influenced.

That is, changes in work organisation cannot be properly appreciated without being based on external environments and contexts. As Elger (1990: 71) stated, a longitudinal study on work reorganisation would be impossible without case studies through in-depth interviews since work reorganisation may be influenced by different dimensions of organisational restructuring, new technologies, the interrelatedness of various aspects of work organisation and sectoral governance regimes.

Abundant data and in-depth knowledge obtained through case studies may actually enable us to look beneath the surface and thereby enhance the reliability and validity of data (Kitay and Callus 1998: 111). Rich data may also provide sound foundations upon which new ideas and theory development can be grounded.

3.2.2. Cross-national Comparative Study

Despite the increasing forces of globalisation, national systems may still play significant roles in shaping and affecting work and employment relations through

national institutions such as the political systems, financial systems and industrial relations systems. Since the research aims to test convergence versus divergence of work organisation, it is essential to take a cross-national comparative approach. However, this comparative study is different from simple comparisons of national institutions or functions between countries (Hyman 1998). It centres on work organisation issues in the telecommunications services industry, in particular work control, reforms of work processes and procedures, and flexibility in the two countries. Similar sets of broad questions were asked of the same or similar groups of workers and managers in the two cases in anticipation of any similar or different problems and patterns of work organisation that may occur. This parallel comparison aims to identify similarities and differences between the two cases in terms of work organisation. It also seeks to examine both the underlying causes of similarities or differences and the ways in which those similarities and differences occur by locating the research findings into national contexts and sectoral governance regimes.

This type of comparative study in the same industry between the two countries can be used to test 'country effects' relative to 'industry effects' (Strauss 1998: 179). As will be explained in the next section, the two cases show considerable differences in national institutions, sectoral regimes and relative positions in the world economy. If converging trends are identified between the two cases, the findings will enhance the generalisability of the 'convergence thesis', extending it to the telecoms industry. Overall, this comparative approach not only tests convergence vs divergence hypotheses but may also enhance the explanatory power and validity of the results and analysis of the research.

3.3. Case Selection and the Unit of Analysis

The two telecommunications operators, British Telecom (BT) and Korea Telecom (KT) have been chosen for their contrasting national contexts as well as for practical reasons in the light of the research focus and hypothesis. National contexts and the consequent sectoral regimes are completely different from each other, though they have been subject to similar competitive global pressures. The two companies were both former state-owned public monopolies. Both have national networks that link nearly every home and their operations are scattered across the respective countries. They are 'integrated telecoms operators' which provide all kinds of telecoms services including fixed-line voice and data services. BT became a privatised company in 1984, while KT is a partly privatised public enterprise, currently on its way to being fully privatised. BT is recognized as a forerunner in the restructuring and remaking of nationalised industry in the new external environments. According to KT managers interviewed, BT is regarded as a model for KT to imitate and learn from. The simple comparison of the two companies can be reflected in chart form as follows.

Table 3 - 1 **The comparison of the two case companies**

	British Telecom	**Korea Telecom**
ownership	privatised in 1984	partly privatised, starting from 1993, being privatised
fixed-line services	providing all kinds of services	providing all kinds of services
mobile services	Cellnet division	KT Freetel as a subsidiary
market capitalisation FT 500 world ranking	$ 151.55 bn (31. March 1999) 25	$ 47.00 bn (31. Dec. 1998) 115
annual turnover	$ 27,750.9 m	$ 9,083.4 m
number of exchange lines	28,049,000 lines (+ 4,522,000 for mobile phones)	20,089,000 lines
number of employees	124,700	56,599
general market share in fixed line services	67 percent	85 percent
optical fibre	4,058,000 km	11,667 km

Source: BT.1999 Annual Report; KT 1999 Annual Report, Financial Times 500 (4 May. 2000)

The restructuring of KT and changes in work relations have happened within a distinct national context and sectoral regime from those of BT. The position of Britain as a global financial centre as well as its position in the European Union and Commonwealth, has enabled BT to become more sensitive to development in international markets, whilst the possibility for KT to expand in world markets has been relatively limited. Despite these contextual differences the two carriers are comparable in terms of being former public monopolies, their still dominant position in domestic fixed telecoms markets, their ownership of fixed national networks and their presence as providers of nearly all kinds of telecommunications services. These differences in national institutions, sectoral regimes and relative positions in the world economy provide a good opportunity for the hypotheses to be tested.

The research revolves around work organisation issues such as work control, changes to work processes and procedures, and flexibility. These are basically workplace related issues. Therefore, the level of analysis will focus upon workplace level developments regarding the patterns of changes to work organisation and the nature of such changes. Although we place and analyse BT and KT as a whole in their contexts, we cannot deal with work relations in every part of these organisations but rather, there is a need to focus on certain parts. Some groups such as switching technicians and operators in the telecoms industry have been relatively well researched (Clark et al. 1988; McLoughlin and Clark 1994; Vallas 1993). Moreover, the number of switching technicians who had been crucial in the industry has dramatically reduced to less than one tenth over the last decade as switches became computerised and digitalised.

The two main groups to be selected for investigation are: (1) field technicians in the

access network who maintain or fix the local loop, or install or fix telephones at customers premises; (2) customer service representatives (CSRs) in Customer Services Centres (CSCs) or front-desks in local telecoms centres who deal with calls concerning service orders, fault reports, billing enquiries and complaints via telephone. Other groups of workers such as clerical workers and operators will at times be touched upon. In 1998/9 BT employed around 15,000 field technicians. By contrast KT employed 6,300 as of Dec. 1998. Numerically these field technicians are the single largest group of employees in both companies. CSRs in BT numbered 5,600 (+2,400 agency staff) by the end of 1999, whilst KT employed around 4,000 CSRs at the end of 1998, thus making them the second largest and increasingly important group in both firms, as marketing and customer services gain more weight. This latter group has been a popular object of research, as call centres have become a new focus of academic investigations. Both groups of workers can be commonly referred to as front-line workers who have direct contact with customers and provide key services, representing their companies. They are also primarily responsible for service production in the two companies, like factory workers in manufacturing. These features of the two groups as front-line workers primarily in charge of service production provide research advantages over looking at other groups. They enable us to investigate what service production systems look like and how they have evolved as a whole within the two firms. They also allow us to examine how relations with customers influence service production.

However, the two groups of workers contrast in that the majority of CSRs have been exposed to radically changing new technologies. The clerical group composed of CSRs seems to have been heavily influenced by new technologies such as CTI

(Computer Telephony Integration), while the field technician group seems to still retain the strong elements of craft work despite the introduction of new work scheduling technologies. Each represents clerical functions or technical ones and possesses different cultures reflecting the differing occupational labour markets and the nature of work. These two groups of workers can be regarded as broadly representative of most employees in both companies. They are also compared with each other within the same companies. In order to investigate work organisation, the two respective CSCs (and local telecoms centres in KT) and the two local field technicians areas were selected in each company, though more extensive data collection and interviews were carried out beyond the investigated locations so as to get national pictures in each function. The research mainly covers the period ranging from the late-1980s to the late-1990s when the restructuring of British Telecom and Korea Telecom took place. It aimed to track the evolution of work organisation over these years.

3.4. Methods of Data Collection and Analysis

There is a famous saying in East Asia, 'the blind touching the elephant' which means that the blind cannot easily figure out what the elephant looks like because what the blind touches is only part of the elephant. The initial period of fieldwork for data collection was just like 'the blind touching the elephant'. To get a tangible picture from the data collection and data analysis processes is rather like piecing together a jig-saw puzzle. The processes of data collection and data analysis are not as straightforward and sequential as is often thought. And methods of data collection may depend upon the nature of data. There were interactive and "back-and-forth" processes between data collection and data analysis. For accuracy and clarity of factual evidence multiple

sources of data such as in-depth interviews, observations and documentation were used.

3.4.1. Interviews

The main method of data collection was through interviews. Fieldwork was conducted twice for each company between May 1997 and September 1999. Fieldwork was focused firstly on KT and then on BT. The first round of interviews was open-ended and flexible, which enabled new dimensions of work organization issues to be uncovered. On the basis of the data analysis of the first round of fieldwork, the second round field was semi-structured and more focused on specific issues in KT and BT such as corporate restructuring, work control, rationalisation of work processes, flexibility and the links among these. Interviews were conducted firstly at the company headquarters and then at the workplaces in both cases. Over this period a total of 122 people were interviewed; 35 union officers or workers and 20 managers in BT, and 34 union officers or workers, 31 managers in KT and two government officials in Korea.

Three senior personnel managers at BT in charge of industrial relations and personnel matters at the corporate level were interviewed in order to establish how management has responded to changes in external environments, how management strategies are linked to IR strategies, how corporate restructuring took place, what its general manpower policies are, and what its union policies are. Four personnel managers of the business units responsible for the access network and CSCs were also interviewed with the aim of questioning how management strategies and their associated IR strategies were translated into concrete policies for organisation, HR and work organisation over the years. Interviews with two resource managers in charge of CSCs and one audit manager were conducted to help examine how resource

management and quality checks develop and are implemented. Ten line mangers including four FMs, three first line managers of CSCs and three second line managers were interviewed in order to look into how organisational changes took place and how they introduced and implemented work control, the reform of work processes and the increasing use of flexibility. On the union side, four senior union officials in the CWU headquarters and two union officials in the STE headquarters were interviewed to investigate the general industrial relations climate in BT, what were the main issues during corporate restructuring and how the unions coped with those issues. Three union officers and four CSRs at three CWU clerical branches, and four union officers and four field technicians at three CWU engineering branches were intensively interviewed over the detailed implementation of organisational changes and work reorganisation, and the union's response to them in CSCs and in the field respectively. Similar questions were asked of five union officers, four field technicians and five CSRs at other CWU branches in the interviews carried out at the CWU conference, held in May 1998. Interviews with some informed interviewees were conducted two to four times. When there were grey areas requiring clarification during the writing-up period, twenty short follow-up telephone interviews with some former interviewees were also conducted to help make such matters clear.

In the KT headquarters interviews with eleven senior and middle managers in charge of organisational issues, personnel matters, IR and regulatory affairs were conducted, reflecting the relative concentrated management structure. Questions were asked of them to help track broad developments in the sectoral contexts, KT management's relationships with the government, how KT responded to the sectoral developments in terms of its strategies and corporate restructuring, and what kinds of

employment and work issues KT management focused on. Two senior managers in regional divisions, and four general managers of local telecoms centres were also interviewed to question what were the focuses of KT management, how KT management steered its organisational changes, and the extent of attention paid to work organisation. Seven line managers responsible for the access network and seven line managers in charge of CSCs or front-desks at local telecoms centres were interviewed to examine how management strategies and policies were implemented and what kinds of change took place at the workplace in terms of management structure, employment and working practices. On top of the interviews conducted concerning managers telecoms policies, regulatory matters and the relationship between KT and the government were asked of two government officials in the MIC. Interviews with eight current or former union officials in the KTTU headquarters and four regional union officials focused upon how corporate restructuring happened and influenced KT employees, and how the union responded to various management initiatives and the changes to labour-management relations. Six union branch officers at local telecoms centres, eight field technicians, five CSRs in CSCs and three CSRs at front-desks were interviewed in order to look into the major impacts of management initiatives on them, what kinds of work reorganisation took place and how work is organised and managed. Interviews with some managers and union officials were carried out twice in order to explore and clarify matters arising during first interviews.

Work organisation issues have more multi-faceted aspects in contrast to other HR/IR issues. Although there was a theoretical framework to help guide the research, the aspects of work organisation that would be looked at, were not determined at the outset of the research. The research process was flexible enough to uncover certain

important dimensions of work organisation. While interviewing CSRs, field technicians, their union branch officers and managers, important work organization issues gradually emerged, as did the dimensions or facets that have been controversial in both cases. Later fieldwork focused upon those issues in order to grasp the situations in the 1980s, how and why they have evolved, and what issues are evident in these current forms. After the interviews and documentary data collection were completed, an eight month-long period of transcription of the interview tapes and rough reading of the data collected slowly revealed that the major issues arising concerning work organization are work control, the reform of work processes and the flexible use of the workforce.

3.4.2. Observations and Documentation

In addition to interviews, thirteen observations of the workplace and union meetings took place: two days were spent shadowing the field technicians in KT and BT; three half days observing CSCs (Customer Service Centres) and front-desks in KT; two half days observing CSCs in BT; attendance of the CWU and STE conferences respectively; and observance at KTTU branch meetings. Accompanying field technicians provided good opportunities to look at and gain a feeling about how they actually work in the field, how their work is controlled and organized, and to ask field technicians how their work has changed. Observations of BT and KT CSCs revealed how CSRs (Customer Service Representatives) work and use computer screens and how their work is measured and monitored. These observations disclosed some tangible feelings about their work, which led to asking more concrete questions at subsequent interviews. Attendance at the CWU and STE conferences in May and July in 1998 provided good opportunities to interview a number of union officers and BT's first line

managers. Observation of the CWU and STE conferences and attendance at KTTU branch meetings helped to identify how the issues that they raised mattered and why.

Fortunately, access to the CWU' library was unlimited, which made it possible to investigate masses of invaluable documentary data including a great deal of correspondence between the unions and BT, the unions' letters to their branches (LTBs), the unions' briefings sent to their branches, agreements between the two parties on various issues and many other data over the period between the late 1980s and the 1990s. Various internal BT documents, BT's monthly magazines, CWU's magazine, and various CWU branches' monthly or quarterly magazines or various circulations were made available through BT, STE and CWU. Archives of the former union, the NCU were made available via the Modern Record Centre at the University of Warwick. Many internal documents including recent ones were also made available by KT but KTTU's documents were not very diverse thanks to their poor recording practices. All the above data became great sources for the research. They contained detailed descriptions of why and how certain policies or practices at BT were planned and implemented and what the consequences were as well as unions' responses to them. Oftel's publications, the MIC's publications, BT's official publications and internal documents, and KT's official publications and internal documents helped develop an appreciation of reforms in telecoms governance regimes and how they have impacted on management strategies and structure. The understanding was complemented or confirmed through interviews with various key actors.

The examination of how global forces lead to pressures to reform telecoms governance regimes and how national political systems and business systems mediate global forces, influence reform in sectoral governance regimes and shape management

strategies, was carried out by tracking and updating many secondary sources such as book chapters, journal articles and newspaper articles on the relevant themes concerning the telecoms industry.

The same questions were asked of a number of people in the same groups e.g. CSRs and field technicians and managers in order to reduce individual interviewees' subjective assessments or experiences. When more or less coherent answers were replied to the same questions, the answers were accepted as being reliable. Much incorrectness, many errors, or ambiguities, for example, numbers, years, or other facts that arose from limited memories of interviewees over the past were rectified by documentation. Multiple sources of data allowed triangulation to be made by crosschecking interviews with documentary data so as to enhance the reliability of the data (Yin 1994: 92).

3.4.3. Methods of Analysis

Furthermore, a database was created from the data collected through interviews, documentation and direct observations by using 'Procite', a reference management programme. The database created was very useful for coming up with new ideas or categories grounded on data regarding corporate restructuring and work organisation by classifying or reclassifying data accordingly. Multiple data sources seem to have led to richer findings and deeper understandings of management strategies, the processes of corporate restructuring and how work has been reorganized. How the picture emerges from the data collection and data analysis was just like 'the contour of an iceberg rising above the surface of the sea from below'.

In order to grasp the direction and emerging patterns of changes in work

organisation, a historical approach as well as a snapshot one is taken. The research sought to track how the current forms of work organisation came into being by looking at the processes of corporate restructuring and the reform of work processes and procedures over the period from the late 1980s till the 1990s. The testing of the convergence vs divergence hypotheses makes sense only when we compare the evolving patterns or trends of changing work organisation rather than the simple comparison of the current forms of work organisation between the two cases. This is because it is expected that a simple comparison of the current work organisation may always lead to divergence.

CHAPTER 4. NATIONAL INSTITUTIONS

4.1. Introduction

National institutions may influence work and employment relations in two main ways in the telecoms industry. National institutions may shape management strategies and corporate restructuring by moulding sectoral governance regimes in their nation-specific ways and forms under certain technological and competitive conditions of the sector, which in turn affects work and employment relations. National institutions, particularly national industrial relations institutions, may directly or indirectly constrain or facilitate changes in work and employment relations in a nationally distinctive way.

Above all, it is necessary to define what sectoral governance regimes are. Institutional arrangements that govern economic activities may differ by sector as well as by country. Borrowing Hollingsworth et al.'s expression (1994: 8), 'sectoral governance regimes' can be defined as 'mechanisms of governance required to coordinate transactions inside as well as across sector boundaries'. Sectoral governance systems can also be regarded as a compromise between national institutions and sectoral specific/technological conditions because national institutional contexts significantly affect and shape sectoral regimes which are also influenced and transformed by international competitive pressures. The influence on sectoral governance regimes of global structural forces may constitute an important source of institutional change (Hollingsworth et al. 1994: 10).

National institutions are composed of a number of institutions such as political systems, industrial relations systems and business systems that interlock with each

other. We need to briefly look at political systems, business systems and industrial relations systems in the two countries because the three systems are considered to be factors influencing management and work relations. When sectoral governance regimes, 'business recipes' in Whitley's words (1992a: 270), are subject to change arising from techno-economic pressures, national institutions constrain some changes or facilitate others. Sectoral regimes constitute a more specific context in a particular industry in which the restructuring of work and employment relations takes place. When one sector undergoes reforms in its governance regimes or industrial adjustment, national institutions tend to shape adjustment strategies or reform paths in governance regimes in nation-specific ways. A number of nationally distinctive types of reforming or adjusting governance regimes or industrial adjustment have been identified. Alterations in governance regimes in the telecommunications sector involve the transfer of the ownership from the state to private hands.

Academic analyses differentiate between different industrial adjustment strategies: the American liberal ones, the Japanese statist ones, and the German corporatist ones (Katzenstein 1989: 347-9); radical, market-oriented changes in Britain, incremental coordinated ones in Germany and state-led ones in France (Lane 1995: 199-203); comparing paths of changes in telecoms systems, a market-led one in the UK, a state-led one in France and, a negotiated one in the Netherlands (Hulsink 1999). Focusing directly upon work and employment practices, Katz (1997) identifies three types of restructuring strategy: technology and market-driven ones in Anglo-Saxon countries; labour-mediated ones in Germany, Japan and Italy; and state-led growth and modernization ones in Mexico and Korea. From a separate strand of discussion about governance regimes, Hollingsworth et al (1994: 5 –8) suggest that there are five

different mechanisms of governance: markets; hierarchies; states; networks; and associations. Each sector or each economy has the mix of the various modes of governance in different contexts. The reform of governance regimes in a certain sector can be said to take place according to changes in the extent or mixture of various modes of governance.

In light of the types shown above, the more or less similar public-monopoly model of the telecoms industry has differently evolved into a more 'market-based' governance regime in the UK and a 'state-guided' transitional one in Korea, as will be explained in chapter 5. Attention then turns to identifying the major factors that make them nationally distinct sectoral governance regimes. Hall (1986: 231-2) argues that patterns of economic policies among the European nations are determined by the distribution of power among the key social groups such as labour, capital, and the state as well as by the position of the nation within the international economy and the organization of its political system. With specific reference to the telecoms industry, Hulsink (1999: 292-300) suggests that major nation-specific institutional factors which influence the shaping or reform of telecoms governance regimes are the domestic ruling coalition, the role of the state in economy and society, the mechanism of interest intermediation, the economic approach and ideologies prevalent in national telecom policy and the individual country's particular position in the international political economy. Bearing in mind these institutional factors listed above, we can simply divide the major institutional factors into political systems, industrial relations systems and some elements of the business system.

This chapter examines what British and Korean national institutions look like, how they may affect change over time, in terms of political systems, industrial relations

systems, and some relevant elements of business systems, comparing like with like. It also investigates how the institutions may affect changes in industrial adjustment, reform in sectoral governance regimes, management strategies and trade unions' attitude towards industrial adjustment in direct and indirect ways.

4.2. National Institutions in Britain

Britain has developed relatively thin national institutions in favour of a more market-regulated system. Business pressures on both parties have been more heavily weighted towards the concerns of international finance than those of industry (Hall 1986: 63). Embedded political and economic liberalism, and the commitment to laisser-faire capitalism have tended to limit the state to its minimalist role. The industrial governance regime has relied on privately enforced negotiations and voluntary compliance and regulation of industry, often being flexible and informal. The Thatcher government encouraged fundamental shifts in the policy paradigm from Keynesianism to monetarism that has led the state to further retreat into a minimalist direction, and reducing the influence of national institutions (Hall 1993: 284 - 5). In these processes the Conservative governments supported by big businesses and financial capital represented by the City of London, pressed neo-liberal reforms in macro-economic management and industrial policies by reducing the interventionist role of the state in favour of markets. This led to the privatisation and marketisation of public enterprises and public services including the telecommunications sector.

In the face of the need to raise significant capital for upgrading the network of British Telecom and deal with criticism of its inefficient operations, the Conservative governments sought solutions. Thus, inspired by a neo-liberal ideology, a practical need

for upgrading networks and demands for high-quality, low cost telecoms services from large business users in the City of London, they initiated the drastic reform programmes, leading to a transformation in the governance regime via the privatisation of BT, the full liberalization of markets, infrastructure competition, and the detailed regulation by an independent body. Reflecting neo-liberal ideology, the interests of the dominant actors and the demands of network modernisation, the state initiated the whole reform processes towards a more market-oriented governance regime in the telecommunications services industry as will be detailed in chapter 5. These processes of reforming the governance regime provides the backdrop against which work restructuring in BT has taken place.

One important system in Britain that has contributed to shaping organizational structure and strategy is the financial system (Lane 1995:199). With the stock market acting as the main source of financing capital the fact that the shareholders' interests are prioritised to other stakeholders' interests in corporate governance of British firms should be emphasised. As powerful institutional investors have been primarily interested in short-term portfolio management rather than the future viability of business, long-term investments in R&D and capital-intensive equipment may have suffered. However, paradoxically, the financial market's expectation about high rates of return from the booming telecoms sector has led to support for the privatisation of, and investment in, BT and thereby encouraged industrial restructuring of the telecoms services industry. The British financial system, together with the Conservative government's liberal policies, has helped transform the telecoms governance regime from a public-monopoly system towards a more market-based regime. Its short-term interests have forced BT to adopt more cost-cutting strategies and to carry out massive

corporate restructuring.

Big firms are characterised by a high degree of dispersion of ownership and control, which means that shareholders have tended to identify little with the company and have sold shares as prices have risen, contributing to firms' short-term horizons affecting investment, product strategy and employment policy. This short-termism, arising from the ownership structure of firms, has affected management strategies towards labour (Lane 1997: 66).

There are a number of characteristics of the British industrial relations system that may have impacts on the reform of the telecoms governance regime, management strategies, corporate restructuring and work organisation. However, the fact that industrial relations in the public sector were very different from that in the private sector should be taken into account because BT used to be a public enterprise up until 1983.

First of all, there has been a strong tradition of voluntarism in regulating industrial relations that is closely linked to embedded liberalism (Edwards et al. 1998: 4-5). The state has played a largely abstentionist role in conducting industrial relations (Hyman 1995: 28-30). When trade unions faced systematic attacks on joint regulation from the Thatcher government, the lack of legal protection provisions made trade unions vulnerable. However, the state played profound roles first, in fostering public sector industrial relations and later in reforming it.

Secondly, the systems of interest intermediation have not developed significantly enough to aggregate interests in both parties. In parallel with the underdevelopment of employer associations, trade unions have often been multiple and fragmented. The delayed rationalisation of industry helped occupational unions survive longer, which was an important factor behind the fragmentation of trade unions and persistent shop

floor control. Although the public sector had been more centralised than the private sector, the former has undergone decentralisation since the Thatcher government.

The third characteristic is the craft control tradition. The historical roots of craft control in Britain can be traced back to craft control for production and the slow, late modernisation of industry (Lazonick 1997). Joint regulations over a wide range of work and employment issues in the public sector, coupled with craft-based traditions, were claimed to lead to restrictive practices. Many of these work-related issues, together with other informal rules and understandings, were subject to erosion by the reassertion of managerial prerogatives toward control over the labour process. When management initiated the reorganisation of production to increase efficiency, workplace union organisation whose predominant interests were distributive issues has lacked the strategic capacity to formulate intellectually coherent responses to production issues (Terry 1994: 229-30, 237).

However, when we consider industrial relations in privatised enterprises such as BT, these general references to British industrial relations systems which largely predicate on the private sector, have to be revised. Industrial relations in the public sector has been considerably shaped by government policies such as funding, legal and administrative rules and formal or informal interventions in management. The good employer obligation encouraged high union density and fostered extensive arrangements of centralized formal or informal joint consultations and negotiations over a wide-range of issues in public enterprises. These arrangements tended to slow down the pace of changes and to block management attempts to remove 'restrictive practices' (Pendleton and Winterton 1993: 10; Batstone et al. 1984: 144).

The Thatcherite reform of industrial relations aimed at legally restricting trade

unions, especially in the public sector, removing statutory support for collective bargaining and deregulating labour markets. The reform of industrial relations in the public sector was undertaken through privatisation and marketisation (Colling and Ferner 1995) as well as decentralisation. This reform, combined with other concomitant measures taken, led to weakening trade unions *vis-à-vis* employers in terms of bargaining power, which means a move from joint regulation to increased unilateral regulation by employers (Dickens and Hall 1995: 293). The Thatcherite reform of industrial relations, the absence of legal institutional guarantees, the reassertion of managerial prerogatives and weakening workplace union organisation may have had significant implications for work and employment restructuring.

4.3. National Institutions in Korea

Modern national institutions in Korea were created in the context of the post-war settlement and the late industrialisation. Korea has seen the development of dense and homogeneous national institutions, composed of closely interconnected sub-systems such as the strong developmental state, chaebol-dominated economy and a labour-exclusionary industrial relations system.

The state in South Korea 'overgrew' and became greatly powerful *vis-à-vis* society through the help of the USA during the Korean War in 1945–53 and the continuing confrontation with North Korea (Choi 1988: 308; Choi. 1994). The 'overgrown' state was able to effectively mobilise resources for a designated purposes, industrialisation (Whitley 1992b: 120; Lee 1996) and to transform itself into a strong authoritarian developmental state in the industrialisation process (Amsden 1990: 24-5). The military governments took the role of orchestrating industrialisation through a more effective

allocation of resources secured since the early 1960s. This was achieved through 'industrial targeting', and the fostering of national champions by granting subsidies and incentives to more successful companies on a selective basis (Amsden 1989; 1995: 795; Chang and Kozul-Wright 1994: 880). The growth of Korea Telecom was planned and implemented by the state as part of this state-led industrialisation until the early 1990s.

The military governments, which legitimised their authoritarian rule through economic growth into the mid-1980s, were powerful enough to place under their control, employers and trade unions so as to serve the overarching objective of industrialisation. The state played a significant part in managing collective labour relations via legal and administrative means plus the intelligence agency (Choi 1988: 302-3). Korean society, under 30 years of successive military governments, was effectively militarised (Whitley 1992b: 132). Firms tended to imitate the military regime in terms of hierarchical structure, centralised decision-making, autocratic management and the lack of horizontal coordination (Janelli 1993: 48-9, 225-8). However, the existing means of conflict management through repression increasingly lost its effectiveness and faced a challenge to its legitimacy. Political liberalization after 1987 has brought about a significant shift in the institutional framework. The role of the government in economic management has slowly begun to change from an orchestrating subsidiser to a regulator since the early 1990s (Cho 1992).

Chaebol, diversified industrial conglomerates in Korea, were created as a means of realising a kind of mass production in Korea's late industrialisation (Amsden 1990: 16-7). Its authority hierarchies have been based on a centralised ownership structure through cross-shareholdings enabling owner families to control chaebol's subsidiary firms like 'an emperor in their own group'. There has been little coordination between

chaebol not just in trade policies but also in employment policies. Chaebol's management style has been paternalistic and autocratic, though its authorities were sometimes challenged by trade unions. The characteristics of chaebol, including a vertically integrated management structure with cross-shareholding, centralised decision-making, a low degree of formalisation and an authoritarian management style, have, to varying degrees, been adopted by almost all private and public enterprises in Korea.

As a consequence of the financial crisis, the government has implemented drastic reforms of financial systems and forced private firms and public enterprises to push corporate restructuring towards more market-responsive systems (MoFE 1999: 40). This reform of the financial system has prompted the majority of surviving firms including chaebol to fundamentally restructure their operations (MoFE 1999: 43). Since the financial crisis, over half of Korean firms have undertaken organizational restructuring and employment via redundancies, reorganization, refocusing on core businesses or switches to other businesses (Hankyore Daily News. 18 Jan. 2000). Prompted by the crisis and government pressures, the telecoms governance regime has undergone a significant transformation from a public-monopoly regime towards a more market-oriented one.

The annihilation of the left forces during the Korean War and the emergence of the strong state were important factors in shaping 'unitarist' industrial relations systems in the post-war formative period. During the 'late industrialisation' the state's labour strategies continued to be based on the unitarist, repressive policies. These appeared to be in line with the low skills, low cost economic growth strategies based on increase in exports in the first phase (Kuruvilla 1995; Deyo 1989). Trade unions based on

enterprises were actually submissive to the state and employers until 1987, when political democratisation began. In such a political and economic context, the Korean industrial relations system has developed a number of characteristics. Above all, of great importance is the centrality of the state in the conduct of industrial relations at both national level and workplace level. Latent conflicts under the military governments erupted into a wave of strikes across the nation after 1987 when state intervention in trade unions began to decrease.

Secondly, enterprise unionism enforced by the state has become an entrenched arrangement for collective bargaining in the context of no craft control tradition, the lack of occupational labour markets and rapid industrialisation (Park 1992: 112). Enterprise-based unions characterised by fragmentation, uncoordinated actions and a weak confederate structure (Wilkinson 1994: 354-5) tend to focus on distributive issues and are not well prepared to deal with production issues following industrial adjustment. Trade unions often oppose any industrial restructuring outright. Unlike in Japan, enterprise unionism in Korea tends to make labour-management relations hostile because of the lack of coordination between employers and very weak confederate structure of unions.

Thirdly, large firms have developed organisation-based employment systems in order to retain and increase skilled labour during rapid industrialisation. Corporate employment systems were created on the basis of lifetime employment, seniority and corporate welfare benefits. For nearly 20 - 30 years of continuous growth, these firms have rarely experienced any restructuring accompanied by downsizing or redundancies. These employment systems helped enterprise unionism nest in their companies and provided the material basis for paternalism. Apart from corporate welfare arrangements,

there were very poor social welfare systems in Korea. As a consequence of these arrangements, for most employees 'to lose a job would mean to lose everything'. That is why trade unions are so sensitive to restructuring involving job losses.

The fourth feature is an authoritarian, paternalist management style. Most of the big firms have often had founders who are charismatic characters and exercised strong authority over their managers and employees through a hierarchical order. This management style was reinforced by the militarisation of the society and unitarism. It often unnecessarily provoked trade unions, contributing to the development of adversarial labour-management relationships.

Lastly, the Korean industrial relations system has undergone a significant change since 1987. With the political democratisation of Korean society since 1987, strong 'independent trade unions' that often had chaebol's big factories as an organisational basis began to emerge. As strong trade unions demanded a new framework for workplace governance, the industrial relations system has gradually moved away from unitarism to pluralism since 1987. Independent trade unions often collided head-on with authoritarian management and the existing hierarchical order as well as still lingering, if retreating, repressive labour policies of the state. This has contributed to the development of an antagonistic labour-management relationship since 1987. Trade unions in big firms showed that they had significant powers to block or scale down any attempt by management to restructure.

These characteristics are largely applied to the public sector as well, though state intervention is much deeper in the conduct of industrial relations here than in the private sector. However, the pressing need for corporate restructuring that arose from the financial crisis forced the government to change labour laws so that employers are now

allowed to make employees redundant for the purpose of corporate restructuring. The new legislation has not only permitted employers to lay-off workers but has also meant the beginning of the collapse of established corporate employment systems. Most big private firms as well as public enterprises have been able to press ahead with corporate restructuring including downsizing in the midst of trade unions' overall resistance to restructuring.

4.4. Conclusion

We can summarise the main characteristics of national institutions in both countries as the following table. The national institutions of the two societies have trodden along completely different trajectories in the three aspects. While four global structural forces identified in chapter 1 have forced existing sectoral regimes to change, national institutions in each country are likely to shape and influence sectoral governance regimes, which in turn become contexts in which management and union strategies are formulated and work is reorganised in a certain way. Thus, despite the central role played by the state in reconfiguring telecoms governance regimes in both countries, the British institutions are likely to adopt a more market-fostering approach, while Korean institutions are likely to rely on state-led solutions.

The market-oriented approach to reconfigure telecoms governance regimes in the face of global forces seems to correspond to political systems, financial systems and industrial relations systems in Britain. The Thatcher government broke the mould of providing infra-structural services on the monopoly basis through the public sector, transferred to private hands and introduced competition. Neo-liberalism and its emphasis on the rollback of the state were instrumental in driving this reform. Financial

systems and the position of the City of London in world financial markets also facilitated market-oriented transformation of the telecoms regime by supporting the privatisation of BT, the introduction of competition and its focus on short-term profits. For example telecoms services were heavily used by multinationals and large firms who wanted to see market-driven reforms. The limited legal regulation of industrial relations helped corporate restructuring take place without too many hurdles.

Table 4 -1 **Comparisons of British Institutions with Korean ones**

	British institutions	Korean institutions
political systems	the state - abstentionist, at least after 1979 - embedded liberalism - shift in policy paradigm towards monetarism - market-driven industrial adjustment strategies	the state - interventionist, autoritarianist - orchestrating role in economic growth and industrialisation - entrepreneurial statism - state-led industrial adjustment strategies
business systems	- development of the stock market - emphasis on short-term profits - dispersed share ownership – low degree of identification with firms – short-term horizons - low reliance on rules – flexible structure	- banks as a means of financing industrial targeting by the state - long-term investment - chaebols as a product of rapid industrialisation - family-ownership – vertical integration and central control
industrial relations systems	- voluntarism - considerable gov't influence in the public sector - weak interest intermediaries – pluralist, fragmented structure - decentralised bargaining - craft tradition and inability to address production issues - Thatcherite reforms	- state-controlled unitarism - weak interest intermediaries – fragmented structure and enterprise unionism - enterprise-based employment systems - move towards pluralism adversarial relationship

As in its industrialisation processes, Korea has also been a late reformer in its telecoms governance regime. Market-oriented reforms were not easily accepted by the major actors until at least financial crisis in 1997. The reform of the telecoms

governance regime was left to the state with the capability to control and coordinate various interest groups and push through barriers to reform. However, the financial crisis has speeded up the reform processes towards a more market-oriented regime, and neo-liberal reform measures so far taken may have had significant implications for corporate restructuring and industrial adjustment strategies. The reform processes have been rather slow and often conflict-ridden because of two things: little tradition of consensus-based cooperation between labour and management; and the break-up of the fabric of organisation-based employment systems.

The kinds of telecoms governance regimes that have emerged in the two countries following different paths of reform are unlikely to become similar to each other in the near future. Management strategies in the two companies that are constrained within the contexts of differing new governance regimes are likely to be dissimilar to each other. Management strategies and union policies may also be shaped in a certain way by national industrial relations systems. Even though globalisation forces are increasingly stronger, and successfully help transform sectoral governance regimes into more or similar ones across countries, national institutions may still affect and mediate industrial adjustment strategies and management strategies unless there is little concomitant change in other sub-systems of national institutions. However, the recent drastic, simultaneous, market-oriented reforms in the financial system, chaebol and industrial relations system as well as in the telecoms governance regime in Korea may lead to significant changes in national institutions and have implications for the relationship between national institutions and structural forces, and its associated management strategies. The potential of this institutional dynamism for industrial adjustment strategies and management strategies has yet to be fully realised.

Then what are new telecoms governance regimes that have emerged from global forces structured by national systems like in the two countries? The next chapter will address that question.

CHAPTER 5. CHANGING TELECOMS GOVERNANCE REGIMES

5.1. The globalisation of the Telecommunications Industry

The telecommunications services industry has been globalised since the-mid 1980s. We can identify four structural forces that have driven globalisation in the telecommunications services industry. These forces not only challenged and forced the existing public monopoly regimes to change but have also tended to get telecoms operators in different countries to do businesses in similar ways. Generally, these are technological innovations, global trends of deregulation and competition, changes in market demands and the establishment of international regulatory framework. These four forces of global nature are interwoven and reinforce each other. Yet they have variably been structured and mediated by national institutional arrangements, tending to give birth to nation-specific sectoral governance regimes. The tensions between the two major forces of globalisation and national systems provide a backdrop against which convergence versus divergence tendencies take place. Let us look at what the four structural forces of globalisation are and their impact in more detail.

First of all, technical innovations such as digital switching and transmission, fibre optic cables, and the convergence of telecoms and computers have revolutionised the ways in which telecoms companies operate. High-speed and high-capacity transmission was made possible by fibre optic cables and digital transmission. Digital switches and sophisticated software packages have introduced flexibility and intelligence into the network, which allows telecoms operators to provide various customised services. These technologies have not only deepened the existing telecoms markets but have also

challenged the existing regulatory frameworks by creating new service markets. The new technologies have also enabled telecoms operators to make direct savings on maintenance and repair work, cut prices and consolidate their operations by automating, rationalising and computerising service work through economies of scale. The rapidity of changes that technological innovations have brought about, exemplified in the penetration of mobile phones and the internet, has been an important factor in the extent and speed of industrial restructuring and work reorganisation. Thus these similar technologies function as a strong force of convergence across countries in terms of how they operate.

The second structural force is the global trend towards product market deregulation. A global deregulatory wave started with the divestiture of AT&T and the privatisation of British Telecom in 1984, both of which were inspired by business users who demanded cheaper charges for long distance and international calls (Batt 1995: 88 - 90). The deregulatory measures in the USA and the UK have increased competitive pressures on telecoms operators in other countries and initiated a series of similar changes such as privatisation and market deregulation. Moreover, the EU's decision to impose on its member countries, the liberalisation of their telecoms markets by Jan. 1998, prompted the privatisation of the former telecoms monopolies such as Deutsche Telekom and France Telecom and the opening of their market to foreign competitors. The Telecommunications Act of the USA in Feb. 1996 which allows US telecoms carriers to freely enter each other's market, was another significant step towards market deregulation. Spurred on by these deregulations of product markets, the WTO telecoms pack concluded by the Group on Basic Telecommunications in Feb. 1997 is regarded as a breakthrough which accelerated market deregulation and globalisation at the global

level. During the 1990s privatisation and market opening became an irrevocably global trend. Increasing competition in domestic as well as world markets. This common trend of market deregulation has thus had great impacts on the restructuring of telecoms operators in most countries.

Customers' diversified demands for services are the third structural force of global significance which has questioned the usefulness of the former telecoms monopoly regimes providing mainly simple voice services. New technologies, facilitated by market deregulation and business customers' demands for various services, have brought about alternative local access services such as mobile phone, cable TVs, fibre optic cables and broadband data services. These new services, made available by new technologies, have created new markets and stratified the telecommunications service markets. Customers have increasingly demanded customized services seeking assurances on quality, security and reliability. These demands in turn have facilitated further technological developments. Changes in telecoms market structure from a relatively simple one to a differentiated, complex one have forced incumbent telecoms operators to restructure their operations to meet these demands, which in turn has had considerable consequences for work organisation.

The slow formation of international regulatory frameworks is the last force of global, structural nature. Two sets of agreements designed to open up markets to fair competition came into effect from 1998 (BT 1999a): firstly, the World Trade Organisation's Agreement on Basic Telecommunications Services between 69 countries accounting for 90 percent of the world $ 650 bn telecoms services; and secondly the European Union's decision to open its members telecoms markets. These two agreements set the date and extent of market opening, formulated rules for fair

competition such as equal access and interconnection. Increasingly more, if still limited, rights to the regulation of the telecoms industry have moved from national regulatory authorities to international regulatory bodies. These international regulatory frameworks have prompted other countries to deregulate their markets, imposing upon them certain minimum requirements. This has forced relevant countries to keep the requirements and thereby has driven some convergence of their domestic regulatory environments across countries.

In the face of these four global forces, national governments have reformed incumbent telecoms operators and/or have privatised them since the mid-1980s in order to survive in competitive markets or take advantage of opportunities given by market deregulation. Management has responded to market restructuring by various strategies, often by a different mixture of cost minimisation and customer-focus ones. Market restructuring has thus been followed by corporate restructuring in former public monopolies, which has in turn brought about subsequent changes in employment relations including work organisation. However, the processes might be mediated, modified or shaped by national systems or major actors. Newly created telecoms regimes may have significantly been shaped and influenced by national systems such as the political system, financial systems and industrial relations institutions. The governance regimes, market-oriented in Britain and state-guided, transitional in Korea, may facilitate or constrain management or trade unions to formulate their strategies and policies in a certain way regarding their structures, employment and work organisation issues. New telecoms governance frameworks broadly consist of industry ownership, the degree of deregulation and competition in markets, and the extent of regulation.

The next section addresses how the British market-based regime came into being

through the first privatisation, deregulation and more intense competition ahead of other countries. It will be followed by a section explaining how the Korean state-guided transitional regime has encouraged partial privatisation, gradual market opening and competition, and regulation. Then how far the three changing dimensions of each governance regime (privatisation, competition and regulation), under intense structural pressures, have affected management strategies, corporate restructuring and consequently work reorganisation indirectly or directly will be examined. Finally, the implications of telecoms governance regimes for the overall analytical framework are discussed.

5.2. Privatisation, Regulation and Competition in Britain

5.2.1. Privatisation

The privatisation of British Telecom represented the first serious experiment by the Conservative government to open up hitherto public enterprises to market control. It was also the first privatisation of a state-owned telecoms industry in the world. The decision to privatise British Telecom was largely inspired by the then Thatcher government's commitment to a belief in free markets, the need to finance the modernisation of the network and the demands of the international business community (Cook 1998: 228; Clarke 1993: 206 -7). Although British Telecom was forced to pursue commercialism before privatisation, it was under the direct political control of the responsible minister (Ferner and Colling 1993). The 'political contingency' (Batstone et al. 1984) encouraged centralised decision-making, formalisation, stability, and consensual approach to employment regulation. British Telecom was also subject to commercial pressures of reducing costs, imposed by successive governments such as

strict cash limits, limiting employment levels, setting performance targets and regular reviews of costs and output during the 1970s and early 1980s (Clarke 1993: 208). Management aims and strategies were subject to various demands such as formal rules, commercial targets, ministerial interventions, public opinion and the pressure of public users' organisations and private sector interests (Batstone et al. 1984). These various forces often had conflicting objectives and made it difficult for management to pursue its strategies consistently.

With the privatisation of BT, political control was replaced by shareholder control. Shareholder control has increasingly provided incentives for BT management to seek maximum short-term profits sensitively reflected in BT share prices, which is characteristic of the British financial systems mentioned in the last chapter. It has also been exercised through crude measures such as the number of exchange lines per employee or revenue per employee, compared with that of American telecoms firms (FT 27 Sep. 1990). This has tended to put considerable stress upon cost reductions and efficiency improvements, which has in turn driven radical corporate restructuring and work reorganisation. Shareholders are also concerned with the provision of quality of services because poor quality of services and the lack of the operator's responsiveness to customers' varied demands may mean the loss of market shares in increasingly competitive markets, resulting in lower profitability. Poor quality of services may also lead to tougher control by the regulator.

Privatisation has essentially seen the replacement political control by regulator control over prices, competition and quality of services. Without being accompanied by competition and regulation, privatisation may merely signify the transfer of a public monopoly into a private monopoly. The pressures on management for efficiency and

quality of services come from a complex set of interactions among factors which include type of ownership, the market structure of the industry and the effectiveness of regulation (Vickers and Yarrow 1988: 44; Parker 1994: 92-3).

5.2.2. Regulation

A regulatory framework for the telecoms industry was set up as an independent body, Oftel (Office of Telecommunications) under the 1984 Telecommunications Act. The regulator has helped engineer the transformation of BT into a successful private firm on the one hand, while curbing monopolist market power of BT and fostering competition in markets on the other hand. Regulation is needed to develop competition and to protect customers and new, often small competitors from the abuse of the monopoly power of the dominant company (DTI 1998: 51). Overall regulation has exercised influence on two main aspects of BT's behaviour: pricing; and quality of services.

Price-cap regulation: The most important aspect of regulating BT's monopoly is price control via the formulae of RPI - X. As shown in the table 4-1 below, price cap regulation became tighter and the percentage of BT's businesses subject to this increased until 1997. Line rental charges were subject to RPI + 2 with the regulator allowing BT to raise line rental charges significantly and to rebalance BT's distorted price structure by bringing prices for services in line with costs. Since 1997 the percentage of services under price cap regulation has reduced to 26 percent. This release from the price cap reflects the fact that competition in the relevant markets has forced telecoms operators to cut prices. Tighter price regulation from 1991 onwards has forced BT management to improve efficiency through cost reduction as well as

increases in productivity.

Table 5 –1 **Changes in the price cap**

Period	Price cap	Percentage*	Service areas covered by price cap
1984 – 89	RPI – 3	48 – 53%	local & national calls
1989 – 91	RPI – 4.5	55 – 56%	as above + directory enquiries and operator assistance
1991 – 93	RPI – 6.25	64 – 66%	as above + international calls
1993 – 97	RPI – 7.5	64 – 67%	as above + interconnection charges
1997 -2001	RPI – 4.5	26%	bottom 80% of residential customers
1984 – 97	RPI + 2		rental charges, installation/connection charges

Source: Oftel Dec. 1995. *Pricing of Telecommunications Service From 1997*-Consultative Document; Oftel. 1999. *1998 Annual Report*
Note: Percentage: percentage of BT's group turnover under price cap

Quality of services regulation: As was revealed in 1987 when quality of services suffered because of field technicians' strike, quality of services has been a politically sensitive issue. The government and the regulator have been keen on meeting customers' expectation of quality of services via regulation. In 1991 regulatory bodies were given stronger powers for the privatised utilities in the form of approving the procedures in handling customers complaints and introducing the 'Citizen's Charter'. BT introduced its 'Customer Guarantee Schemes' as a means of implementing the Citizen's Charter in which customers would receive financial compensation for the failure of service delivery to meet the stated target time limits. Oftel has also published 'comparable performance indicators' for residential customers and business customers respectively in terms of 6 performance indices including service provision, customer reported faults, fault repair, complaint handling, billing and disconnections (Oftel. Feb 1999). These performance indicators are to be reflected in the next price cap regulation, that is, poor quality of service performance is likely to result in tighter price cap regulation.

Price-cap regulation, combined with competition, has led to price cuts in BT. Average prices for BT services fell in real terms by about 50 percent between 1984 and 1998 (by 37%, 68% and 56% for local, national, international calls respectively) (DTI 1998: 44; Oftel 1999: 25). These cuts have compelled BT management to cut costs and to increase efficiency in order to maintain or increase profitability. These cost-savings and efficiency enhancements have been sought through corporate restructuring and work reorganisation. Price-cap regulation and falling prices have been often used by management in order to justify various cost-cutting measures, organisational changes or work reorganisation (Ferner and Colling 1993: 129). Quality of service regulation has also pressurized BT management to pursue customer-focused strategies as discussed in chapter 6. BT management, in the midst of emphasising intensified competition, has used price cap regulation and quality of service regulation in order to promote the contradictory objectives of both cost reduction and an improvement in quality of services at the same time.

5.2.3. Deregulation and Competition

The processes of deregulating telecoms markets, engineered by the government, have been phased. In the Duopoly Review in March 1991 the existing duopoly situation on fixed lines was ended and the liberalisation of domestic telecoms services markets started, although international facilities-based telecoms services were still only allowed to BT and Mercury until 1995. The growing liberalisation of UK telecoms markets has considerably facilitated competition in local and national call markets since 1993 and in international call markets since 1997. In order to take market share from BT new

entrants have used strategies involving undercutting call prices, targeting business markets or providing cable TV services bundled with telephony and internet services in low prices. The degree of developments in competition are reflected in BT's market shares in table 5–2 below.

Table 5 – 2 **BT's market share in the UK telecoms market (%)**

	market share				
	1992/3	1994/5	1996/7	1998/9 Q4 resident. business	Nov.1999 Q3 residential busin.
local calls	96.1	94.4	89	79.0 69.8	75.6 63.0
national calls	89.1	83.2	79	80.3 53.4	76.3 49.0
internat'l calls	77.6	70.0	62	66.6 30.0	59.1 28.1
leased lines	na	95	88	88	
overall	89.3	na	81	76	

Source: Oftel. 1995. Annual Report; Oftel. June 1999. Market Information; Oftel. March 2000. Price Control Review: A Consultative document issued by the Director General of Telecommunications on possible approaches for future retail price and network charge controls.
Note: market share in terms of revenue, in 1998/9

Because of the increasing competition, BT has considerably lost business markets and international call markets to competitors. Growing competition and the substantial decline in BT's market share since the early-1990s have increasingly put pressure on BT to reduce its call charges in such markets. Both BT's falling prices and sharp decline in BT's market shares in those markets, have led to a corresponding reduction in profitability in these markets. Sharp decline in market shares and falling prices alongside new technologies available have pressurised BT management to undertake corporate restructuring and work reorganisation to cut costs and improve productivity.

The relative weight of traditional fixed voice telephony services in the total turnover has considerably shrunk over the years from 52.5 percent in 1992/3 to 36.6 percent in 1998/9, excluding line rentals. This has forced BT management to further reduce costs in voice services in order to maintain profitability and extract cash to invest

in the expanding areas. However, intensifying competition, especially in business markets has also prompted BT to focus on customer care in terms of quality of services and customised services in order to keep business customers and to capture the emerging markets in competition. However, new services such as mobile phones, data services, multi-media and network solutions including non-UK operations have increased significantly enough to counter the decline. This shift is reflected in BT's repositioning or diversifying strategies from a simple voice provider towards being integrated services provider.

A number of unambiguous forces have emerged during the transformation processes of the telecoms governance regime in Britain. The clear objectives of BT management have been to pursue profitability. Shareholders' short-term expectation of high profit, tight price control and growing competition are combined together to give birth to strong pressures on BT management to reduce costs and to improve efficiency in the face of falling call charges and BT's shrinking market share. BT management have been constrained to pursue rigorous cost-cutting strategies. Competition for quality-sensitive customers and the challenge from new competitors who are specifically targeting niche business markets, together with quality of services regulation, tend to highlight the importance and sensitivity of quality of services in terms of reliability, speed, expediency and the degree of customisation. BT management has also had to emphasise the provision of quality of service and customised services. The slow shift away from the traditional voice telephony towards mobile, data communications, multimedia services and the growing weight of global markets has inspired BT to re-establish its position in new expanding markets. This

new regime constitutes a context in which management strategies have been formed and corporate restructuring has taken place.

5.3. Partial Privatisation, Regulation and Competition in Korea

A transitional governance regime of the telecoms industry has emerged in Korea in response to global forces. Although the regime has slowly adopted market principles through partial privatisation, competition and regulation since the mid-1990s, the state has maintained significant influence in formulating major telecoms policies in KT. However, direct political control has been weakened with the transition of KT's status, the partial privatisation of KT and the shift in the government's policies towards relying on market mechanisms prompted by the financial crisis.

5.3.1. Public Enterprise and Partial Privatisation

From its establishment as a public enterprise in 1981, KT was subject to comprehensive formal and informal regulations and supervision of the government. This government intervention in KT management was justified in the period when the expansion of the national network needed the government's support for capital and administrative measures. Public enterprise status was a suitable vehicle for the expansion of the national network, given the levels of long-term investment required. When KT tried to manage various businesses in a more commercial way after the network expansion, ministerial interventions became barriers to efforts of KT management to efficiently run its businesses. Political considerations were often given priority over the internal requirements of KT management, as shown in the political appointment of a former army general as the chief executive of KT in 1995.

In the government's eye KT management, who capitalised on its natural monopoly, was too relaxed and inefficient. From the early 1990s the government imposed on public enterprises including KT various reform measures including the assessment of management performance, budget control, the introduction of private sector management practices and incentive schemes, employment reductions, the rationalisation of grading structure, a tougher stance towards trade unions in wage negotiation and a reduction in various welfare benefits (MoFE 1993. 1994. 1995). These initiatives in the first phase of reform led KT management to shape the politically imposed 'moderate commercialism' that will be discussed in chapter 6. However, often conflicting, political and commercial, objectives and changeable political priorities of the government have caused inconsistencies and confusion for KT in formulating and implementing corporate strategies or policy-making.

As the restructuring programmes of the public sector in the second phase, the government has sold off 41 percent of KT shares between 1993 and 1999 and changed KT's status from a Government-Invested Enterprise (GIE) to a Government-Backed Enterprise (GBE) in 1997.[3] These changes have allowed KT management to have more scope for autonomy by redefining the relationship with the ministry, now creating one at arm's length. The financial crisis in 1997 has given KT management the momentum to expand its own autonomy by pushing its own reform agenda to help bring about corporate restructuring and to improve efficiency beyond measures imposed on KT by the government. The changed environments have helped KT management to have more

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[3] . Government Invested Enterprises are public enterprises more than 50 percent of whose shares are owned by the government, whilst less than 50 percent shares are owned by the government in Government Backed Enterprises. According to the relevant law which altered KT's status from a GIE to a GBE, KT management can exercise its authority without government intervention in the appointment of a chief executive, its decision-makings, and policy

discretion and to pursue commercialism on their own.

5.3.2. Regulation

The regulation of the Korean telecoms industry is characterised by the fact that there has been no clear boundary between the government's intervention and regulatory authority. The MIC has been authorised to regulate licensing, prices, interconnection and fair competition. According to KT managers, officials of the MIC have often used their regulatory authority to intervene in KT management. Regulation is more likely to be imposed by political considerations or ministerial interests as well as by industrial and economic accounts. Although the government established the 'Korea Communication Commission (KCC)' in 1992, the commission has remained an advisory agency to the MIC which has the role of ensuring conditions of fair competition, protecting rights of users and effective arbitration for disputes between telecoms operators. With a view to preventing KT from abusing its dominant market power and to creating fair-competitive conditions, the MIC applies asymmetrical regulations to KT in the area of prices.

Price Regulation: Regulation by the MIC largely concerned prices until the early 1990s. With the exception of KT, all service prices of facilities-based telecoms operators need only to be notified to the MIC. KT services prices were determined on the basis of 'the rate of return' as well as on the basis of the assessment of their impact on inflation levels and their political influence until the early 1990s. Prices of local calls were deliberately kept low because of their influence on inflation. Any increase in

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formulation, though telecom regulation still remains..

prices for KT services still require approval from the MIC, whilst they must also consult with the MoFE in accordance with the Price Stabilisation Law (MIC 1999). These strict constraints have prevented prices from being rebalanced according to the costs of services. According to KT management, local call charges have remained at around 86.2 percent of costs (KT Aug. 1998). The MIC has cut prices of long distance and international calls on the basis of falling costs and the rate of return.

The government's policies of keeping prices low, together with the late adoption of more modern telecoms technologies, have helped KT management tighten budgets, especially labour costs. The proportion of KT's labour costs as a percentage of annual turnover has remained around 30 percent since 1990. These low labour costs have led to much less pressure on KT to downsize the workforce when restructuring its operations, which will be discussed in chapter 6.

Quality of Service Regulation: Although there have been a number of measures whereby KT has assessed quality of service themselves, there has been no regulation of quality of services by the government. Despite the absence of quality of service regulation from the MIC, customers have become more sensitive to quality of service issues. Customers' sensitivity to service quality is reflected by the media, which has had indirect regulatory effects on KT concerning quality of service. The increasing quality sensitivity among customers in the contexts of growing competition has driven KT management to stress quality issues in terms of courtesy towards customers and to further promote culture changes in KT. As late as 1999, the MIC introduced a Telecommunications Performance Monitoring System (TPMS) to ensure that customers can choose a reliable service and that telecoms operators offer the better quality of

service. The TPMS uses an independent agency to evaluate customers services based on the data submitted by operators (MIC Dec. 1999). The results of the TPMS are as yet unknown.

In short, regulation has been under the direct control of the government. The government has sought to keep prices low and to encourage gradual competition in telecoms markets to develop through regulation. Low price policies throughout the 1980s and 1990s have had the effects of controlling costs, especially labour costs, which, to some extent, have relieved KT of much pressure to reduce the staffing level in restructuring processes. Growing quality sensitivity among customers has led KT management to focus on quality of service issues. However, the effects of regulation cannot be separated from those of competition dealt with in the next section.

5.3.3. Deregulation and Emerging Competition

Korea was not open to competition in telecoms markets until the mid-1990s. The main drive to market deregulation in Korea has been external pressures from the USA and later the WTO constantly raising the issue of market opening (Hyun and Lent 1999; KT 1992: 395-6). The continued pressures from the USA, the negotiations for market liberalisation through a 'Negotiating Group on Basic Telecommunications (NGBT)' and the great potential threat of market opening spurred the government to deregulate domestic markets. The government policy was to encourage domestic competition first so that domestic telecoms markets may be saturated with domestic operators, and then to open telecoms markets to international competition.

Telecoms markets have been deregulated in phases between 1990 and 1996-7 (Cho

et al. 1996) with competition building up a momentum since the mid-1990s. New telecoms operators launched their services in international calls from 1992 and then in long distance calls from 1996. Competition in the long distance, lease lines and international calls accounting for around 40 percent of KT revenues, has just started. Developments in competition have been slow as can be seen in Table 5 –3 below, though new entrants have made substantial inroads in international calls. The effects of this erosion have been regarded as significant by KT because the size of long distance market is much bigger than that of international market.

Table 5 –3 **Market Share of KT in each markets**

	1991	1992	1993	1994	1995	1996	1997	1998
local calls	KT's monopoly							
long distance calls	no competition					91.40	90.61	91.3
leased lines		84.3	86.6	88.5	90.6	90.4	91.6	
Intern't calls		79.0	73.3	72.8	75.5	75.5	73.2	69.7

Source: KT. 1999. Annual Report; KT. 1997. "The Analysis of 1996 Integrated Management Performance, p. 23, 26.

Another important development to note is the rapid growth of mobile phone market from 3.1 million subscribers in 1996 to 22.8 million by Nov. 1999, leaving KT with little room to expand. Low prices in both long-distance and international calls, coupled with the loss of KT's growth potential, in a situation where local call prices (86% of the costs) make losses, have squeezed even further KT's profitability after 1995.

This new phase of competition has led to lower call charges and very low profitability in KT. Falling profitability and the loss of growth potential between 1997-9 have had significant consequences for KT management strategies and corporate restructuring. KT management has been increasingly required to adopt a more rigorous commercial approach to corporate restructuring and work organisation since 1996-7.

Moreover, the IMF crisis of 1997-9 provided KT management with another spur to initiate corporate changes and to strengthen its commercial strategies in order to survive in a new competitive world.

Overall, the partial privatisation, the move to an arm's length relationship with the government, tight price controls from the 1980s onwards and developing competition are the main characteristics of the current telecoms regime in Korea. These moves have tended to slowly change KT from a public monopoly into a quasi-private firm, though the processes have often been ridden with conflicts between frequent ministerial interventions, efficiency-seeking measures imposed by the government, and KT's own managerial initiatives. Though pressures on KT management to cut costs were not great until the mid-1990s because of relatively small labour costs and slow development in competition, it substantially increased in the late 1990s with increasing competition and in particular, the financial crisis in 1997. However, KT has faced the more important task of changing corporate culture in order to make itself operate like a profit-maximising private firm. The relatively low cost pressures and the greater need for cultural change have had implications for management strategies and corporate restructuring.

5.4. Conclusion

As discussed in chapter 4, global pressures are not just mediated and shaped by national systems into telecoms governance regimes in each country. These governance regimes constitute a context in which management strategies are formulated and corporate restructuring takes place. Management strategies and corporate restructuring

in BT and KT are constrained or facilitated in the context of these telecoms governance regimes in each country, which will be examined in chapter 6.

The comparison of the telecoms governance regimes in the UK and Korea indicates that the two countries have clearly followed different paths of development in reforming those regimes. Changes in the respective governance regimes in terms of the speed, scope and extent of their reforms of privatisation, regulation and competition have differed to a considerable degree. Under the same global structural pressures, Britain has developed a more market-based regime by privatising BT earlier, introducing tight regulation, opening markets and encouraging competition. BT management has increasingly faced stronger pressures of saving costs and enhancing efficiency in the new governance regime and at the same time of guaranteeing quality of services and customised services during the 1990s than those in the 1980s. By contrast, the Korean government, in the face of the same structure forces, has carefully steered the way to the partial privatisation of KT, early tight price controls, phased market opening and the modest development of competition. KT management has encountered the tasks of, above all, how to transform its supplier-centred ethos and then of how to reduce costs. These differences in governance regimes between the two countries, especially in terms of ownership, market structure and the degree of competition, together with different kinds of pressure on management arising from them, have shaped the management strategies of both companies in different ways. These also form the backdrop against which corporate restructuring takes place, which is discussed in detail in the next chapter. What kinds of management strategies and corporate restructuring these differing governance regimes have shaped and influenced in both companies, in the face of similar structural competitive pressures, will now be examined.

CHAPTER 6. MANAGEMENT STRATEGIES AND CORPORATE RESTRUCTURING

Management strategies and corporate restructuring are important intermediate variables in mediating and transmitting global forces into work reorganization. Management strategies that are, to a significant extent, a product of interactions between global pressures and national systems influence the processes of reorganising work in certain ways or directions. The existing management structure and corporate restructuring may also constrain or facilitate work restructuring in one way or another. Although management strategies and corporate restructuring themselves are significantly influenced by national institutional arrangements, they are not simply dictated by the latter. There seems to be certain room for management to manoeuvre in reorganising work. Therefore, the focus on the changing processes of work organisation in this study necessitates taking into account these variables.

In the monopolistic environments providing simple, standardised products until the mid-1980s, neither BT nor KT developed sophisticated management strategies. However, new management strategies are required to meet the needs of a changing market structure, new technologies and increasing competition in markets. Strategies based on cost-cutting and increasing customer-focus have been the two major, if often conflicting, logics adopted in order to drive corporate restructuring in differing clarity and priorities between the two companies. The underlying logics influencing corporate restructuring have been the decentralisation or customer-focus following market segmentation, and centralisation or consolidation driven by cost-cutting exercises or new technologies (Batt and Keefe 1997: 49-50; Ferner and Terry 1997: 94-5). Cost-

reduction strategies are normally realised via a reengineering and/or rationalisation approach which makes full use of the economies of scale (Hammer and Champy 1993), while customer-focus ones are more related to job-enhancement (Batt 1995: 15-6) or quality enhancement (Schuler and Jackson 1987: 209-13). Although management strategies are also closely related to industrial relations strategies, the latter cannot simply be read off from the former. Industrial relations strategies are also influenced by the power of unions, labour legislation and custom and practices. The potential for either innovation or automation made available by new technologies depends upon labour strategies (Zuboff 1988).

As Chandler (1962: 383) argued, management strategies may be reflected in changes to management structure and corporate restructuring in both cases. Management strategies are guiding principles whereby corporate restructuring is planned and implemented. However, management strategies may also be affected by organizational factors such as the existing management structure or embedded practices. The methods and extent of corporate restructuring are also constrained and influenced by other national factors such as the dominant forms of structure, legislation, unions, and the relationships between industry, financial markets and ownership structure. Corporate restructuring can involve various aspects including re-engineering, rationalisation/ consolidation, downsizing and relocation. These dimensions of corporate restructuring may, to a more or less extent, have important implications for work reorganisation.

To this end there is a need to examine what strategies management in each company has adopted to meet competitive pressures in the changing contexts, and how the management strategies have been translated or implemented into corporate

restructuring. It is followed by the analyses of changes in management structure and how corporate restructuring has taken place in the two cases. We will then briefly compare management strategies and corporate restructuring between the two cases and discusses their implications for work organisation.

6.1. Management Strategies in BT

Freed from political interventions, BT management, which has been under shareholders' control, has had clear objectives of pursuing maximum profits. Facing increasing competition and more diversified customers' demands for services, BT management has been under the twin pressures of saving costs and providing customised quality of services. BT management has responded to these pressures by refocusing on core and newly emerging businesses, reorganising its structure to serve segmented markets better, cutting costs and focusing more closely upon customers demands. These strategies have often functioned as mutually contradictory logics behind the corporate restructuring associated with them. The roles of the top managers who were brought in from outside the company were crucial in formulating and implementing these strategies. These managers have initiated culture changes and corporate restructuring based upon clearer strategies. The implementation of those strategies have also been facilitated or supported by new technologies.

The selling-off or outsourcing of non-core businesses, frequent major reorganisation exercises, re-engineering, consolidation, relocation and downsizing have been guided and shaped by these strategies. Depending on priorities given to one of the three strategies (repositioning, cost-reduction and customer-focus), corporate restructuring has been heavily influenced. Divisionalisation, the creation of thinly

sliced business units or trading units and reorganisations to match defined customer segments were guided by customer-focus considerations. Other dimensions of corporate restructuring such as re-engineering, rationalisation, relocation and downsizing have been driven by cost calculation. Management strategies, which have led to corporate restructuring, have indirectly affected work organisation. Both cost-reduction and customer-focus strategies are linked to their respective labour management strategies. For example, cost-reduction strategies may have driven work reorganisation in terms of work control, work rationalisation, and flexibility, while customer-focus strategies have led to another form of control, customisation, and other forms of flexibility. These labour management strategies, and in particular strategies towards work organisation, have determined whether to use the potential for automation or innovation made available by new technologies. BT management has used the twin logics of minimising costs and providing customised services in order to press ahead with corporate restructuring and work reorganisation, while the unions have countered BT's cost-cutting strategies by insisting on the need to provide quality of service.

6.1.1. Repositioning

BT's repositioning strategies have largely been sought by hiving off non-core businesses and moving to newly emerging businesses which have been identified as having huge growth potential. After privatisation in 1984, the predominant consideration of profitability led BT management to separate core from non-core businesses and sell-off the latter from BT in 1991- 4. BT also contracted out debt collection, security services, catering and cleaning services which had employed 7,000 staff, and the maintenance services of 8,000 buildings across the UK in 1991- 9, while

other businesses such as Building Facilities Management were put up for in-house bids or bids from outsider contractors (BT. July 1999). These strategies refocusing on core businesses have led to significant reductions in the number of workers directly employed by BT and the worsening of pay and working conditions in those activities contracted out.

BT has also made conscious efforts to reposition itself not just as a provider of traditional voice services on fixed-line services but also as a provider of fast growing services such as data services including Internet, mobile services, solutions to business needs as well as global telecoms services. These new services markets offer BT the most important opportunities for growth ("BT Today." June 1999), for example, BT's internet service grew by 300 percent a year during 1997/8 and BT's internet revenues accounted for 15 percent of all calls in July 1999. BT is replacing its voice network with a system based on Internet technology ("BT Today." Aug. 1999; FT. 05 Nov. 1998, 10 Dec. 1998). BT's mobile operation, BTCellnet has grown at a rapid rate with its increase in annual turnover by 29 percent. BT has already reaped the benefits as a data services provider and mobile operator with the rapidly expanding use of the Internet and a significant increase in calls to mobile phones ("BT Today." March 1999).

BT has also sought to adopt a strategy to establish itself as a global player. BT management has sought to restore the loss in increasingly competitive domestic markets by gaining market shares in other countries. The global strategy also caters for increasing international traffic of multinationals and other big corporations by linking its global network or by forming a strategic alliance with other global operators. However, significant losses due to global investment for a number of years have to be financed by domestic operations that can make profits. BT has invested a lot in eleven

new operators in eight European countries and completed its pan-European network. Thanks to its global presence BT is well positioned to provide seamless international services for multinationals and other big firms.

The implications of BT's repositioning strategies for industrial relations are considerable. The selling-off or outsourcing of non-core businesses has led to downsizing or the lowering of working conditions to the market level. The large investment needed for upgrading networks should be financed from current 'cash cows' such as voice services. BT's global investment has also required significant capital injections which are often followed by losses for a number of years. The funds for the huge investment should be secured through cost reductions and increases in revenues from the existing main sources. In the face of turbulent, fast growing telecoms markets the need for speedy investments has prompted BT management to rely on cost-reduction strategies rather than quality of service ones.

6.1.2. Cost-reduction Strategies

In the 1990s the most conspicuous strategies pursued by BT management concern cost reduction. There have been a number of reasons underpinning these. Relatively tough price cap regulation imposed by Oftel has led to compulsory reductions in service prices which have in turn forced BT management to cut costs. Moreover, the ban on cross-subsidisation from international or national calls to local calls led BT management to rigorously cut costs in local call businesses. New telecoms operators have begun to carve out, through price-cutting competition, a significant proportion of the more lucrative international and business markets from BT, forcing BT to lower prices and consequently threatening to lower profitability. As shareholders and City analysts

compare BT with American telecoms companies by its profitability and efficiency measures such as exchange lines per employee or revenue per employee, BT management has been under a strong pressure to minimise costs including labour costs. New technologies have provided BT management with significant room to automate, rationalise and consolidate its operations and work processes, providing opportunities for cost savings. BT has had to rely on cost-cutting exercises to maintain profitability which has been threatened by shrinking market shares in international call markets and business markets. To meet shareholder expectations and efficiency measures, BT has been forced to reduce costs. These pressures to minimise costs have provided a good justification for BT management to drive forward corporate reorganisation, and work restructuring all of which have had a potentially negative impact upon workers.

BT has been able to take advantage of economies of scales made available by digital technologies and sophisticated computer systems in order to reduce labour costs. Cost-reduction strategies, combined with the huge capacity of new technologies, constitute a centralising logic. Moreover, the 'systemness of the network' as a whole tends to lead to the centralisation of functions. Huge digital switching and optic fibre transmission capacities, together with computerised systems, have enabled BT to rationalise or consolidate various operations having been scattered around the country into a fewer sites or centres. New technologies have also been used by BT for the purposes of rationalising work processes, customising services and controlling work as a major way of minimising costs. Thus the cost-minimisation strategies may have had profound consequences for corporate reorganisation and work organisation in BT, which will be detailed in chapter 6 - 9. The automation of various functions associated with new technologies have also greatly reduced the level of staffing required, bringing about

unprecedented downsizing. Even if BT has made considerable profits, they have made nearly half of the workforce redundant over 5 – 6 years in the 1990s. Tight control over budgets has also led to even more redundancies and the extensive use of external flexibility. The use of new technologies by BT management for cost control also has resulted in tighter work control, various ways of work rationalisation, automation, the extensive use of external flexibility and spatial flexibility.

6.1.3. Customer-focus Strategies

The third strategy adopted by BT management has been influenced by the requirement for focusing on customers' various demands. Customers' diversified demands for services and their levels of bills are identified and have developed into a number of market segments, depending on their purpose of service use, their extent of using service volume and their use of the kind of services. The telecoms market is composed of a number of market segments such as big business markets, small and medium business markets, residential markets, voice markets, data service markets, international call markets and national or local call markets. Each market segment should be matched with the appropriate specialised part of the organisation dealing with each market segment. Intensifying competition in business markets has contributed to the specialisation or customisation of services that in turn has led to the establishment of separate organisations. Moreover, the proliferating number of services made available by new technologies has been used for customers' convenience by the increasing number of customers with sophisticated demands. Thus customer-focus strategies, and how to best serve, or respond to, diversifying market segments, have led to a decentralising logic. Markets should be segmented thinly enough to identify similar

kinds of customers' demand and these thinly segmented markets should be served by a separate organisation which is geared for specific customers' demands. Corporate reorganisation has also been driven by these strategies. Frequent reorganisations and 'Project Sovereign' in 1991 which transformed the hitherto district-based organisation into a more customer-based one, followed these strategies crudely. In the mid-1990s the introduction of thinly sliced business units in BT reflected this decentralising logic. In this regard customer-focus strategies have had profound consequences for corporate reorganisation.

Another aspect of BT's customer-focus strategies is the emphasis on the need to meet customers' convenience. Each part of the organisation, which is designed to serve a certain market segment or to be responsible for a certain function, should also be flexible enough to provide the increasing number of services for customers within its market segment or function. Every service should be delivered on a 'one-stop service' basis by making a call, for example, to '150' CSCs without the need to call other relevant functions or departments. The needs for flexibility and one-stop service raised multi-skilling of workers, especially CSRs and field technicians. Other endeavours for customers' convenience include the instant provision of services and PCA in CSCs, and the appointments for installations or repair in the field. These requirements for flexibility, one-stop service, instant provision of services and appointments for provisions and repairs, which arise from customer-focus ideology, have had implications for work organisation. Quality of services or customised service has been a strong weapon of changing working practices and reorganising work. Some 'soft control' measures, customisation and task and time flexibility are related to those requirements.

6.2. Corporate Restructuring in BT

6.2.1. Divisionalisation, Business Units and Trading Units

Divisionalisation

BT transformed its organisational structure through Project Sovereign in 1990-1 by creating three major divisions from the old structure based on 28 Districts. Each district, having a considerable autonomy in operations and important decision-making, provided a comprehensive range of basic services and products for customers, and was responsible for the network (Beattie 1991). However, the organisational disparities between districts, and the difficulties in implementing long-term changes and monitoring their progress were recognised as barriers to task achievement across districts. There were also communications difficulties, the impossibility either to produce generic national working practices or to diffuse best practice between districts and costs incurred from different system requirements (BT Nov. 1990).

In order to address such problems, 'Project Sovereign' created the three main divisions: Personal Communications (PC) division for residential customers; Business Communications (BC) division for business customers; and Worldwide Network (WN) division for domestic and international core network operation (Carrel et al. 1993, 23-4). As a result, BT shifted away from a regionally-based organisation with a supplier-centred ethos towards a customer-oriented, divisional one and was able to reap the benefits of both clearer focus and economies of scale. This divisionalisation also led to centralised decision-making by division. Once the divisional structure was established, each function or business operations within the division could be easily rationalised or consolidated under cost-reduction strategies.

Business Units and Trading Units

Another important development was the establishment of thinly sliced business units of a national structure. Divisions were too large to focus each customer segment or each function. BT decided to introduce operationally autonomous national business units, which were thinly sliced by function or customer segment in around 1993-4. For example, CSCs (Customer Service Centres) were made as a business unit. Field operations were established as two business units. There were twelve national business units in CD (former PCD) and eleven business units in BD (former BCD or NBC) in 1998.

The establishment of business units has enabled BT management to centralise their operations through re-engineering and consolidation for the purpose of cost reductions. Efforts such as internal benchmarking to identify and to diffuse internal best practice were also effectively made. Thus thinly sliced national business units represent a structure of decentralised centralisation, which combines the need for cost savings with requirements for customised services. Their autonomy has remained operational and constrained by tight budgetary controls and rigid performance targets, both of which were set centrally by the division. Two national business units in charge of field operations were subdivided into 13 regional business units in 1997-8 which are composed of 107 Customer Service Teams (CSTs) across the country. These regional business units (RBU) and CSTs reversed the hitherto centralisation logic. These RBUs and CSTs are aimed at encouraging FMs and field technicians to identify closely with their local operations and their community in order to improve customer satisfaction, reduce costs and create an environment where sales people can drive up revenue ("BT Today." April 1999).

'Trading units' were brought in to create an internal market relationship between business units, and a more flexible structure to respond to the rapidly changing market place and to increase managerial accountability (CWU 1997). Trading units tend to increase the decentralisation of decision-making and their respective operations. The arrangement forces each 'trading unit' to go for the least cost supplier of services among external traders and other internal trading units through competitive bidding processes. Trading units have been a further spur to cut costs and to decentralise authority to the level of trading units. Trading units are designed to improve performance across the full range of measures and objectives including profits. There were 44 trading units until 1998 one of which was CSCs in Consumer Division (formerly known as PC division). However, where there were no external trading activities such as field operations, national business units have remained. Each business unit and trading unit has its own board which decides important matters including some IR issues within the guidelines set by division or the headquarters.

6.2.2. Consolidation and Rationalisation

BT has been restructured through consolidation and rationalisation in terms of organisational structure and business processes. This includes business process re-engineering, rationalisation and consolidation. It follows the centralisation logic.

A major BRP exercise, referred to as 'Project Breakout', was initiated around key processes in 1993, alongside the reorganisation based on the introduction of business units (BT. 1996a: 32). 'Project Breakout' was based on the suggestions of the French consultant, Cap Gemini which conducted a BPR study on BT. The BPR was focused on core processes such as service delivery and support processes in order to meet the

internal needs of each business unit and the nature of the processes. 'Project Breakout' was composed of 76 small projects such as 'Project Plan Do', a new process for planning and executing changes to the access network and 'Project Aurora' which sought to improve customer services while increasing revenues through management and CSRs' job design, incentives, training and call streaming (BT. 1995). To improve processes and to support BPR, new technologies have been deployed and system development work such as 'Work Manager System' was commissioned (BT. 1996a: 39). BPR, having started with the 'Project Breakout' was more fundamentally implemented in the middle of large-scale redundancies. Under 'Project Breakout' BT tested the contribution of each function to the company and assessed whether it would be more effective for each respective function to be contracted out.

The consolidation of various functions or centres was facilitated in the 1990s by automation or economies of scale made available by new technologies, the creation of divisional and business unit structures, downsizing and eventually cost-cutting strategies. A number of operations which had been regionally scattered, were consolidated on a wider geographical or national basis. The establishment of a national business unit around service provisions or important functions has become an important basis on which further rationalisation or consolidation took place. Field operations in 28 districts were re-established into nine geographical zones after Project Sovereign, and then reduced to two zones by 1998. These two zones became separate business units along with the total 13 regional business units during 1998. With these reorganisations, internal functions of field operations have been consolidated (BT. June 1996). Field Performance Offices, Resource Management or National Administration Units were created to rationalise a number of field support functions.

The departments responsible for customer services were integrated into, and established as, dedicated CSCs (called CRUs before CSCs), NI (Number Information: directory enquiry) centres and OA (Operator Assistance) centres. For example, more than 200 operator assistance centres which had existed in the mid-1980s, were consolidated into 30 centres in 1993/4. Once CSCs, NI centres and OA centres were established as a respective business unit, these centres began to be rationalised or consolidated with the help of new technologies. The extent of consolidation in '150' CSCs, '151' CSCs, NI and OA is as follows.

Table 6-1 **Consolidation of CSCs, NI centres and OA centres**

	1993/94	1997/98
'150' CSCs	55 sites	34 sites
'151' CSCs	44 sites	8 sites
'192'NI centres	49 sites	46 sites
'100'OAcentres	30 sites	16 sites
The total	175 sites	105 sites

Source: BT internal document (1998); BT. July 1998. *BT Today.*

BRP, consolidation and rationalisation greatly changed the ways in which business are done at BT. In almost all cases consolidations or rationalisations were accompanied by job cuts (BT 1997a; BT 1997b; BT 1997c). Following rationalisations, many staff had to relocate or travel much further than before because each business unit or sector is organised around a given customer segment regardless of their geography.

6.2.3. Building Rationalisation and Relocation

The third dimension of corporate restructuring is office building rationalisation and relocation associated with it. BT's new property policies have sought to increase the degree of office property utilisation through building rationalisation and relocation. Through these measures BT management was able to cut its annual property costs for

over 8000 properties by 30 percent from £1.1 bn to £884 million and the size of the portfolio by 25 percent over the period 1993-9 (FT. 27/08/1999). The continued miniaturisation of advanced digital switching and transmission equipment, BPR, consolidation, and 'garaging at home' have radically reduced the space required, led to the rationalisation of Telephone Exchange Centres (TECs) from 1992 onwards. Despite building rationalisation, some 95 percent of BT employees were located in just 49 percent of the buildings in 1999, while the remaining buildings only catered for 6,000 staff, 5 percent of the total employees (BT. March 1999. "BT Today").

Following the project 'Workstyle 2000', systematic relocations of various functions and operations in BT have been undertaken away from inner London where building running costs are high (London Link Dec. 1995). According to the 'UK Office Plan, 18,000 employees based at 75 buildings in inner London in 1995 will have reduced to 6,500 employees in five buildings by the year 2000 (BT Today. July 1998). Apart from cost reductions, relocation has also provided BT management with the good opportunity to introduce new working practices by equipping new buildings with new technologies.

As a consequence, many BT employees had to decide whether to relocate to a new place, often far from their home, or alternatively to become redeployees or to take redundancies. BT management was also able to lower staffing levels and introduce new working practices through relocation, which was facilitated by new facilities equipped in the new buildings and met little resistance from the existing staff, particularly in CSCs.

6.2.4. Downsizing

The most remarkable dimension of corporate restructuring in BT is unprecedented

downsizing in its size and extent. Downsizing is also closely interrelated to other dimensions of corporate restructuring. Labour-saving new technologies have been instrumental in BT's decision to downsize the workforce. About half of BT employees were made redundant in seven-year period through the successive company-wide redundancy schemes from 1990. Redundancies continued to be made by division or business unit even after 1997. 101,000 jobs between 1988 and 1997 were reduced through redundancies. Redundancies took place to the disproportionate disadvantage of older employees. 38,097 employees (43.7%) out of 87,090 employees made redundant in 1991-7, were over the age of 50 and 59 percent were over 45. There are considerable differences in the number of redundancies among grades, as indicated in Table 6-2 and Table 6-3.

Table 6 –2 **Voluntary Redundancies by grade**

	PCGs	MPGs	ETGs	Operator	clerical	Other	Total
1990 – 96	2,945	17,054	36,816	15,845	12,666	9,485	95,034

Sources: BT Employee Statistics. 1991 - 1997

Note: PCG - Personal Contract Grade (senior managers and middle managers), MPG - Junior managers and professionals, ETG - Engineering and Technical grades (ST, TO, TI, TIIA etc.), Clerical Grades - CO, COMMO, CA.

Table 6 –3 **The number of employees by grade**

occupations	1988/89	1991/92	1995/96	1997/98	change
Managers	40,970	38,670	25,979	25,206	- 38.5%
Technicians	108,802	95,621	59,553	51,319	- 52.8%
Operators	28,094	17,577	3,822	3,456	- 87.7%
Clerical grades	33,398	34,950	25,869	23,814	- 28.7%
PSGA	1,975		3,710	4,934	+149.8%
Others	18,743	12,507	6,173	5,575	- 70.3%
Total	231,982	199,325	125,206	114,304	- 50.7%

Source: BT Employee Statitistics in 1988 – 1997

Note: the number of managers in 1991/92 include the number of PSGs.

PSGA: Professional Sales Grades.

Operators were affected by the digitalisation of switches, the adoption of AVR (Automated Voice Response). The upgraded network through the deployment of digital

exchanges and optic fibre transmission and the automation of network operations has also reduced the need for maintenance, repair and administrative staff. The decrease in the number of employees in other grades reflects BT's strategy to separate non-core activities from core ones and to remove them. The drop in the number of employees in clerical grades resulted mostly from the reduction in the numbers employed at CA (Clerical Assistant) grade. Job losses in CA grade were countered by staff increases in the areas of sales, marketing and customer relations. With the delayering of managerial grades, around 20,000 managers and professionals left BT through voluntary redundancies during 1990-6. Despite the large reduction in the number of managers through redundancies, the number of managers reduced only by 38.5 percent between 1989 and 1998 because of the recruitment of new managers. Conversely the number of employees in PSGs has actually increased over the years.

An important factor underpinning downsizing was the unusually high staffing level maintained up until the 1990, which was due to network expansion based on rather outdated technologies such as electro-mechanical exchanges. The most powerful factor behind the redundancies was recognised as new technologies such as digitalisation, optic fibre cables and computerisation (Darlington 1996). Privatisation, competition and regulation contributed to the redundancies by the hiving off or contracting out of non-core businesses and through shareholder pressure to increase profitability. New technologies, competition, regulation and privatisation were used as the legitimisation for corporate restructuring and downsizing. BT Group finance forced divisions or business units to reduce full-time head count in their organisation by allocating tight budgets to them.[4] The improvements in performance or cost reductions as the outcomes of various dimensions of corporate restructure contributed to downsizing.

The ways in which the redundancies were handled draw attention. The inherited long tradition of cooperative industrial relations in BT has helped BT management and the unions handle redundancies without much conflict. In return for BT's commitment to no compulsory redundancies, the unions showed a pragmatic understanding of the

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[4]. For example, Network and Systems had to plan to cut the number of staff by 5,000 due to budget cuts (CWU London Clerical. Sep. 1997. London Link No. 31).

need for corporate restructuring in the new environment and were able to negotiate better redundancy packages.[5] The widely felt uncertainty and insecurity among employees, due to the impending radical restructuring, encouraged many employees to take redundancies. Employees, who had scarce skills, gained high marks in performance appraisals or were in growth areas, were persuaded not to take redundancies.

The downsizing at BT has had substantial repercussions on its corporate restructuring, employment arrangements, resourcing and work organisation. The proportion of staffing costs against operating costs has markedly declined and lowered the base of the total labour costs. The table 6-4 below tells us about the significance of the downsizing for staffing costs.

Table 6 – 4 **Staffing Costs over Operating Costs in BT plc.**

1984/85	1990/91	1992/93	1994/95	1996/97	1997/98
51%	45.5%	37.8%	34.8%	32.3%	31.0%

Sources: BT. BT Annual Reports and Accounts in relevant years; CWU. BT plc 1999 Pay Claim: Telecoms and Financial Service Executive Report, Table 19, p. 27)

The large-scale redundancies at first were a shock to employees who had believed that they would enjoy lifetime employment. Employment insecurity and demoralisation have begun to be felt widely by all employees. With the delayering of the former hierarchical structure, the chances for managers and non-managers for promotion have become slim. Employees have assumed more responsibility in the existing post but with little increase in authority. Under-resourcing arising from too many job cuts has too often forced employees to work overtime, to postpone annual leave, or to delay participation in training. Each division or business unit under tight budget restrictions

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[5] . Redundancy packages offered in 1992 included the average £30,000 redundancy payment made up of 2 years' salaries, £1,000 training vouchers, 25% bonus of salary and £100,000 plus pension entitlement (Financial Times. 30th July 1992).

has had to use agency workers and contractors rather than recruit more expensive permanent staff, which will be explained in detail in chapter 9. Understaffing has also led line managers to seek tighter performance management in order to maintain or enhance levels of performance with less staff, which has in turn increased stress, pressures and stress-related sick leaves ("London Link." Autumn 1995. No.21; Feb.1996. No.23).

Once the unions accepted the need for corporate restructuring through downsizing and redundancies started on a massive scale, the balance of power tilted towards management. In the face of successive large scale redundancies working practices or work organisation issues were seen as being relatively less significant. The downsizing provided BT management with good opportunities to reform work practices and to reorganise work. BT has made good use of these opportunities and have by and large, successfully implemented new working practices or work reorganisation without significant resistance.

In summary, in response to changing contexts of the telecoms industry BT management has adopted repositioning strategies, cost-cutting ones and customer-focus ones. These strategies have resulted in a fundamental reorganisation of management structures based on two conflicting logics of cost reduction and the provision of customised services. Although the two logics appear to have often been contradictory and stand in the relationship of trade-offs between them, the fine-tuned reorganisation of BT in the 1990s, has achieved a more sophisticated combination of the twin demands for cutting costs and customised quality of services at the higher point of the trade-offs. They have also led to a radical corporate restructuring through BPR, consolidation,

rationalisation, building rationalisation, relocation and downsizing, thus transforming the traditional ways of doing businesses and affecting work organisation. These different dimensions of corporate restructuring, often inter-linked, pushed each dimension further and deepened the extent of restructuring. The improvements in business processes and consolidation have influenced, and gone along with, work processes in the direction of rationalising work and improving performance.

6.3. Management Strategies in KT

KT's status as a public enterprise helped KT maintain the legacies of hierarchical bureaucracy, centralised decision-making and stable employment arrangements specific to the public sector until the first half of the 1990s. The status of KT as a public enterprise was conducive to the rapid expansion of national networks which required huge capital and would result in returns over the long term. During the 1970s - 80s when demands for telephone lines far surpassed supply, a strong producer-centred, engineering-oriented ethos was entrenched. The public ownership, coupled with little competition and relatively low labour cost base, led to less pressures on KT management to start caring about customers and costs, at least until the first half of the 1990s.

However, the government began to impose some commercial measures on KT in the early 1990s. Budget controls and various measures of assessment enforced by the government slowly led KT to steer a direction towards cost consideration and customer care. The government started to slowly deregulate telecoms markets and promote privatisation and competition. All of these had brought in 'moderate commercialism'. In the latter half of the 1990s the main drivers of the changes in KT have been the

evolution of competition, the financial crisis in 1997, and customers' diversified demands for services. The financial crisis has provided KT management with a momentum for corporate restructuring. These led to 'managerial commercialism' in the latter half of the 1990s.

6.3.1. 'Moderate Commercialism'

The government introduced a number of measures for the assessment of public enterprises' performance, and placed the guidelines for the budget control. Private sector management practices and incentive schemes were encouraged to be introduced. The needs to reduce corporate welfare benefits, rationalise grading structure, and adopt a tougher stance against trade unions in wage negotiation, were stressed and monitored (MoFE 1995). These commercial measures led KT management to be more aware of costs and to take some steps to save costs.

Equally important were the gradual introduction of competition in markets and the partial privatisation of KT. The complacency, based upon the public monopoly, began to be undermined by the competitor's inroads into markets. Competition and regulation to protect new operators from KT's monopolistic power forced KT management to respond more actively by either providing better services for customers or charging cheaper call charges. In the early 1990s a number of reorganisations, which separated the department for business customers from that for residential customers, took place at the headquarters. Revenue-generating activities began to be emphasised through the strengthening of marketing departments.

The government also intervened in many important decisions in KT and supervised KT management in detail until 1995-6. Apart from political control exercised through

the two predominant directors of the board representing the relevant ministries, prior approvals of important decisions from the MIC had to be made concerning investments, purchases of expensive equipment, reorganisation or personnel arrangements. On top of the political intervention above, there have been a number of inspections and audits by various state agencies. Detailed ministerial supervisions often shackled KT management from pursuing commercial initiatives more proactively. These often conflicting objectives and changing political priorities of the government have caused inconsistencies in formulating and implementing corporate strategies or policy-making in KT. According to IR managers interviewed, important labour-management policies were often dictated to KT management by the government in 1994 - 8. The government imposed strict limits to wage increases on KT management in 1995-6 in order to keep the level of wage increases low in other sectors of the economy. Government intervention, and its often self-contradictory considerations were exemplified in the frequent replacements and political appointments of KT chief executives.[6] This 'moderate commercialism', combined with limited competition in product markets, led to lesser pressures for corporate restructuring during the first half of the 1990s. Corporate restructuring did not take place in any significant scale and depth that, but rather, was largely been driven by new technologies.

6.3.2. Managerial Commercialism

Entering the mid-1990s, product markets saw various developments such as rising competition from newly licensed operators, falling call charges, growing customer

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[6] . The government replaced KT's chief executive 3 times between 1993 and 1996, two of whom were blamed for coping with the trade union too softly (Joongang Ilbo, daily newpaper, 26 Dec. 1996). A army general was appointed as the chief executive of KT in 1995 as part of

expectations for quality of services. These developments, coupled with miscalculated overseas investment, squeezed KT's profitability almost to the point of zero in the latter half of the 1990s. The financial crisis in 1997 raised a further danger. The partial privatisation and efforts for full privatisation added another pressure. These provided strong pressures for KT to initiate various reform programmes

A new management initiative in 1997, called 'PIN TO KT', highlighted 'profitability', 'incentives' and 'network services', which symbolised changing objectives of the management (KT. 1997b). 'Incentives' were designed to introduce HRM practices replacing seniority and bureaucratic hierarchy. 'Network services' were encouraged to provide reliable and quality of services. Moreover, the alteration of KT status from a GIE (Government Invested Enterprise) to a GBE (Government Backed Enterprise) at the end of 1997 signalled the beginning of the end of detailed government intervention by guaranteeing a significant degree of management autonomy. All of these changes have given birth to a 'managerial commercialism'.

The efforts recently made to pursue 'managerial commercialism' can be seen in various respects. Above all, KT has begun to reduce costs since 1996/7, due to the deteriorating profitability in 1995 –6 and the financial crisis in 1997. The government imposed on KT compulsory budget cuts, cost saving measures and job cuts. KT management was able to make use of the internal crisis and the financial crisis in order to push ahead corporate restructuring for cost reductions.

Secondly, the emphasis on marketing has been matched by increasing customer care programmes and differentiating customer segments. A couple of cultural change programmes have been undertaken to help reform the previously complacent and

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political consideration.

bureaucratic culture and to encourage a more customer-focused approach to service provision. For example, in 1995-6 KT campaigned for the removal of 'seven outdated attitudes' and 'seventy bad practices'.

Thirdly, KT has introduced "management contracts" between senior managers. The contracts have enabled KT management to devolve operational responsibility for some personnel matters and the use of budgets. KT has also begun to introduce new personnel arrangements which stress competence and performance rather than seniority or experience as a criteria for promotion and appraisal (KT March 1997: 16).

Lastly, KT management sought to refocus its businesses through separating core activities from peripheral ones. According to 'KT Vision 2005' of 1996, some workers in peripheral activities were transferred into KT's subsidiaries which were managed differently from KT. KT's strategic plans to move to newly emerging services such as data business, mobile telecoms services, solutions to businesses and internet, have partially succeeded through participation in a mobile phone business as a major shareholder and the launch of internet services.

Despite 'managerial commercialism' and the government's encouragement to reform the management structure, business processes and culture, KT is still subject to, albeit reduced, interventions by the government. Even KT's 'managerial commercialism' has not brought about a fundamental corporate restructuring but sizable downsizing and some reorganisation. The implications of KT's 'managerial commercialism' for work organisation are likely to be limited, taking into account overall limited corporate restructuring and inconsistent commercialism.

6.4. Corporate Restructuring in KT

Up until 1987 KT was organised purely on the basis of combined principles of functions and geography. There was little consideration of different customer segments and to this end there was only one marketing department. In the early 1990s a number of small reorganisations, which separated the department for business customers from that for residential customers, took place. Then divisions without local or regional sub-structure directly supporting them were introduced in the headquarters. These reorganisation exercises mainly focused on making changes in the organisational structure of the headquarters.

6.4.1. Matrix Organisational Structure

KT's management structure has traditionally been based on geographical entities, having had around 260 local telecoms centres, 60 other centres and 10 regional divisions. Most of the basic business activities (sales and billing to field operations, switching and transmission) have been undertaken at local telecoms centres. Regional divisions have not actually undertaken business activities but coordinated those between local telecoms centres or supervised local telecoms centres within their own geographical region. Although KT has recently consolidated local telecoms centres into larger ones, the basic structure remains the same.

Leaving this basic structure untouched, KT introduced four divisions (Telephone, Network, Business Communications and International Communications) in the headquarters during the first half of the1990s. The four divisions have not had the local or regional substructure to implement their policies and have had to rely on regional divisions and local telecoms centres. These efforts did not result in the divisionalisation but ended up with a matrix structure, reflecting a three-way matrix type combining

geographies, functions under the headquarters and divisions in the headquarters (KT Management Diagnosis Commission 1994: 3-8). This matrix structure is likely to make business processes between divisions and the headquarters more complicated, not reflecting the strategic directions of KT management. The matrix structure based on local telecoms centres has hindered KT management from utilising the economies of scale made available by new technologies in order to rationalise and consolidate various businesses or functions.

The rise of managerial commercialism in the latter half of the 1990s led to the strengthening of the marketing activities for separate customer segments, especially business customers and high-spending residential customers. New special organisations which are responsible for internet businesses and private lines have been created.

6.4.2. Rationalisation and Consolidation

Business Process Re-engineering (BPR)

There have been various efforts to make KT more efficient by reorganising functions and tasks, and re-engineering business processes. In June 1996 KT created a BPR team, and analysed 10 core processes including customer services and field operations at local telecoms centres (KT Marketing Team Nov. 1996). Based on the analyses of those processes and the benchmarking of BT, SK telecoms and other big companies, the team identified the following problems with each service process: little differentiation among customer segments; passive system to meet customers' demands, uni-linear processing of service orders; and ineffective operation of processes (KT Marketing Team Nov. 1996: 43-4). Although the plans for BPR were drawn up, the plan was not implemented properly, according to one of the managers involved in the

BPR team. According to the 1999 BPR report (KT Aug. 1999), KT's overall efficiency was assessed to be low with significant room for improvements being identified.

KT has had legacies of hierarchical structure and bureaucratic control. Many activities or duties including minor ones are required to go through, and to get approvals of, senior managers. For example, 38 per cent of staff working time had been spent writing 874 kinds of report before 1996. Unnecessary report forms, rules, provisions or meetings within sections or departments were abolished to make things simpler (KT March 1997: 268). This rationalisation has been facilitated by the computerisation of clerical work, electronic approval systems, and some devolution downwards.

The evidence proves that the reengineering of business processes and functions has been implemented to a limited extent. The three-way matrix structure still prevents KT from fully integrating various activities into more responsive ones to customers' demands. The effort to reengineer processes was often disrupted or backtracked by inconsistencies of KT management or internal resistance from the union or employees.

Rationalisation

KT has consolidated into larger centres a number of functions or tasks which had previously been located at local telecoms centres. 38 fault reception centres and 40 CSCs were created across the country in order to rationalise most of the tasks undertaken at front-desks of local telecoms centres (KT. June 1997: 67-69). The rationalisation of these tasks has been facilitated by new technologies such as digital switches, CTI (Computer Telephony Integration) and ARS (Automatic Response Systems). The integrated systemness of the network and its subsequent economies of

scale are closely associated with the centralising thrust of new technologies. However, this technology-driven rationalisation and consolidation lacked the necessary interconnectedness between themselves because of the absence of strategic intervention of KT management in corporate restructuring (KT Dec. 1998: 8). KT management has not been proactively involved in planning and implementing these rationalisation processes so as to make full use of potential or economies of scale made available by new technologies.

The most important reorganisation has been the rationalisation of local telecoms centres, encouraged by the financial crisis. Although the number of local telecoms centres reduced through the rationalisation exercises from 260 in 1997 to 91 by 1999 (KT June 1999), 159 local telecoms centres rationalised were not completely consolidated but only with their support or administrative functions transferred to bigger centres. This rationalisation of local telecoms centres is closely associated with job redesign at local telecoms centres and with efforts to reduce the number of staff (KT. Aug. 1999; KT. Dec. 1998; KT. Aug. 1997).

There was a considerable barrier to the rationalisation of various tasks or processes. Local telecom centres are so embedded in the local community that they become part of local economic activities. KT employees at the local telecoms centre have been filled with local people. Local people usually visit the local telecoms centre in order to order services, to pay bills, to report faults and to enquire others rather than just to call CSCs. Local people and local employees alike tend to resist any attempt to rationalise their local telecoms centres into other big centres and the circumstance of the local community had to be taken into consideration (KT June 1999: 16). The embeddedness of local telecoms centres in the local community may explain one of the major reasons

why KT could not easily give up the local structure.

6.4.3. Downsizing

Downsizing is another dimension of corporate restructuring in KT. Downsizing is a recent phenomenon in Korea. Korean companies including KT have begun to downsize their workforce since the national financial crisis in 1997. Until then redundancies were rare and employees displaced as a result of new technologies or restructuring were redeployed into other jobs. In 1995 there was a one-off voluntary redundancy programmes for technically redundant grades and old workers. There was strong resistance from the union and employees against further redundancies before 1997.

KT has reviewed the level of the workforce regularly since the early 1990s in order to keep the staffing level low at each part of the organisation (KT Feb.1992; KT June 1997). Many jobs have been saved through corporate restructuring or by new technologies and workforce requirements for various tasks have changed over time. For instance, the rationalisation of local telecoms centres saved 2,124 jobs in 1998 and is expected to save 2,156 jobs in 1999 (KT June 1999: 11, 53). The profit squeeze in 1996 – 7 and the financial crisis in 1997 gave KT management a momentum for downsizing. Redundancies started in 1998 and continued on a large scale in 1999 as shown in Table 6 – 5 below.

Table 6 – 5 **Voluntary Redundancies in KT**

	1995	1998	1999	Total
No of employees	3,068	2,052	8,922	14,042
% of the total	5.14%	3.62%	15.76%	

Source: various statistics from KT

The ways in which redundancies were dealt with reflect KT's specific circumstance. Thanks to the strong elements of seniority in wage progression,

employees with a long tenure have received significantly higher wages than in external markets. In KT management's eyes, employees with a long tenure contribute little more than those with a short tenure, while they have received wages 2- 4 times more than those paid to new recruits. Therefore, the main targets of voluntary redundancies were older workers and workers with long tenure. Although the redundancies were officially voluntary, KT management mobilised almost compulsory means in order to make older employees with at least 15 years services take the redundancy packages, according to the personnel managers. Once a law allowing redundancies was agreed in the tripartite body in the early 1998,[7] when the nation faced the financial crisis, the KTTU had little choice of accepting redundancies on the condition of a voluntary basis and negotiated better redundancy packages. KT provided attractive packages worth an average £24,000 on top of a statutory retrenchment payment in 1999 for people who decided to take redundancies.

The consequences of the downsizing are various.. Though KT paid a lot of money out for the redundancies, it estimates that they can recover the payments in three and half years. The percentages of labour costs over operating cost were 33.2 – 33.4% in 1995 – 6. The figures went down to 25.5 in 1997 and 23.7 – 25.6 in 1998 – 9 (KT July 1998: 8; KT. 1999. internal sources). The sharp drop was due to not only downsizing but also considerable reductions in wages, various fringe benefits and corporate welfare benefits such as bonuses. The downsizing has led KT management to undertake more BPR, rationalisation and consolidation so as to operate with less people. The remaining

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[7]. A tripartite body called 'Nosajunghoeui' was set up in December 1997 when the financial crisis hit Korea in order to remove some legal barriers which made it difficult for firms to make redundancies. Under the government's strong guide an agreement was reached to allow firms to make redundancies in occasions of corporate restructuring in return for the legalisation of the teachers' union which had been banned from 1989 onwards. Although this body still exists, it was practically discredited as a means for bringing in redundancies by unions.

employees at the workplace have had to work overtime or are required to work more than before (KTTU 1998). However there were also positive signs that a significant number of relatively young employees including junior managers were given more promotion opportunities, which had been delayed before because of seniority in promotion.

Overall, in the first half of the 1990s KT management fostered a 'moderate commercialism', which was often shackled by various, formal or informal, government interventions. This 'moderate commercialism' lacked both managerial freedoms to press ahead corporate restructuring and management's strategic intervention in the reform. In the latter half of the 1990s, when competitive pressures became stronger in the midst of the profitability crisis of KT and the financial crisis, KT management launched various restructuring initiatives and secured a significant degree of autonomy from the government, which can be referred to as 'managerial commercialism'. Subsequently, KT reorganized its management structure geared to the service of customer segments and reduced the hierarchical order and bureaucracy.

Corporate restructuring, which had initially been driven by new technology until 1995-6, was initiated by management from 1997 onwards. KT management, taking advantage of the national financial crisis and the internal profitability crisis, undertook downsizing on a significant scale as part of cost minimization measures. However, corporate restructuring has been more or less limited thanks to relatively weak competitive pressures, and the stickiness of the local structure embedded in the local community and other possible route for reducing costs through significant reductions in wage and benefits. The significant but still limited extent of corporate restructuring in

KT appears to have had implications upon the extent of work reorganization.

6.5. Conclusion

The differences in telecoms governance regimes between the two countries have led to diversifying management strategies between the two telecoms companies in terms of their objectives, the extent of the clarity of their objectives, their strategic directions and the degree of the rigorousness in implementing them. BT management has clearly sought aggressive cost minimisation and customer-focus strategies as well as repositioning one, while KT management, trapped in conflicting objectives up to the first half of the 1990s, began to increasingly pursue managerial commercialism in terms of removing bureaucracy, reducing costs, focusing on customers, reforming its structure and exploiting new business opportunities in the latter half of the 1990s. The discrepancies in management strategies in the two companies have been followed by the divergence in corporate restructuring.

BT reorganised its management structure into divisions, further sliced divisions into national businesses units and more recently trading units in order to meet the specific demands of each customer segment. Once reorganised into division and business units, cost minimisation strategies have driven BPR, consolidation, rationalisation, relocation and downsizing in a radically new way. When the unions recognised that corporate restructuring was necessary if BT was to survive in an increasingly competitive environment, the massive downsizing was inevitable and the balance of power has tilted towards management. Although bargaining and consultative arrangements have largely remained intact, the union's strategies of influencing changes through negotiations have not been very effective. During the radical corporate restructuring, the union's role has

remained passive in the sense that it has negotiated consequences of restructuring rather than participated in planning or implementing stages of restructuring.

KT has only reorganised its headquarters into a structure mimicking business divisions without the dissolution of its local structure. Although the division-like structure in the headquarters appears to have partially met the demands of customer segments, KT's local structure is deeply rooted in the local community. The locally-based matrix structure has made it difficult for KT to re-engineer processes, rationalise or consolidate operations, and to focus on specific needs for each customer segment in an effective way. Though increasingly driven by commercial interests, KT management has not been so rigorous in seeking profit-maximisation. However, the shock effects of the financial crisis, together internal profitability crisis, have spurred corporate restructuring. The union has attempted to resist any change accompanying any corporate restructuring. Although the resistance was effective when the union had power to block changes, it has become ineffective when the union lost power and the situation has become unfavourable to the union due to the financial crisis. The hostile attitudes of the union towards corporate restructuring and its interests in distributive issues have made the union increasingly more reactive in responding to reorganisation and corporate restructuring.

Corporate restructuring in BT has been driven by management strategies that have taken advantage of economies of scale made available by new technologies. Corporate restructuring BT has basically resulted from the combination of the two strategies, cost minimisation and customer-focus. Corporate restructuring in KT has not gone as far in relation to a significant re-engineering of business processes and rationalisation but has remained rather reactive to the introduction of new technologies. Apart from these

differences in national institutions and telecoms governance regimes between the two countries, diverse trajectories of the two companies may explain different management strategies and corporate restructuring. For example, relatively low labour costs due to low wages and low prices may explain weaker cost reduction pressures on KT management and less emphasis on cutting labour costs, while the high proportion of labour costs out of operating costs in BT has driven BT management to be obsessed with reduction in labour costs.

Thus BT can be regarded as having reached a higher point at which a predominant cost-reduction or centralising logic is combined with a customer-focusing or decentralising one, while KT can remain at a low point at which the two logics have under-developed. These management strategies and corporate restructuring function as intermediate variables which are placed somewhere between national systems, or more specifically national telecoms governance regimes and dependent variables, work reorganization. Management strategies are influenced by global forces, shaped by national institutions, and formulated in the context of national sectoral governance regimes. Management strategies and corporate restructuring are not dictated by these global forces or national contexts but actively involve in work restructuring to a certain extent and thereby directly affect the process of reorganizing work. Now we move to work reorganization in the next chapter.

CHAPTER 7. WORK CONTROL

7.1. Introduction

One of the core elements in work organisation is related to how management controls work. Work control problems are argued to arise from the open-endedness of labour contracts. Changes in work control may be more controversial than any other issue because of this indeterminacy. The fundamental challenge management faces is how to survive industrial adjustment in increasingly competitive environments. One of the strategic ways in which firms respond to the challenges is through the management of the workforce, in particular how to control or elicit their consensus as a way of improving efficiency in terms of costs, productivity and quality of service.

Let us briefly review some relevant literature on management strategies before going into a discussion on work control. There have been long-standing dichotomies concerning the approaches taken to labour management. One questions how to extract maximum efforts from workers who are often seen as reluctant or opportunistic. The other is aimed at eliciting of employee cooperation or commitment to corporate objectives. These dichotomies distinguish between labour strategies based on the following: 'Theory X' and 'Theory Y' (McGregor 1960); low trust and high trust (Fox, 1974); high commitment and low cost (Batt, 1995); intensification and empowerment (Waddington and Whitston, 1996); and cost-cutting/centralisation and empower/ decentralisation (Osterman, 1996). These two contrasting strategies intend to gain distinct management objectives of compliance and commitment by means of coercion and consent respectively. However, this over-simplified dichotomy of management strategies may not capture variations within the two broad management strategies and

therefore deserves more examination.

Although Braverman's (1974) argument that Taylorism separates 'conception' from 'execution' and brings about degradation of work by concentrating control into management's hand invites attention to the labour process, he is criticised for mystifying craft control. Friedman (1977) dichotomises management control strategies into 'direct control' and 'responsible autonomy', which shares the main features of the oversimplified management strategies mentioned above, despite the emphasis on the dynamics of worker resistance. Edwards's (1979) argument for the historically evolving model of control such as 'simple control', 'technical control' and 'bureaucratic control' neither recognises simultaneous co-existence of different control mechanisms within the same firms or sectors, nor corresponds to historical evidence. In another stream of the labour process theory, Burawoy's (1983) three successive types of production politics such as 'market despotism,' 'hegemonic regimes' and 'hegemonic despotism' highlight the importance of state intervention in the labour process and the emergence of the hegemonic despotism with decreasing state intervention in the new era of globalisation. However, he does not see the possibilities of co-existence of the three types of control system within the same countries, industries and firms. Although all these explanations contribute to the greater understanding of work control issues, they cannot characterise the subtle dynamics of work control in the current workplace driven by management strategies under global pressures. Moreover the reconfiguration of work control systems during corporate restructuring processes is not dealt with appropriately by the theories above.

We start with how to capture restructuring of control relations in the telecoms industry in the next section. The third section focuses on how BT has developed its

control systems, 'hard control' and 'soft control', what has contributed to the development of various control relations and their theoretical implications for the existing control literature. In the next section we look at how KT has introduced or adjusted its control mechanisms under the new environments and the outcomes. The last section concludes with a comparison of control systems of the two firms and seeks an explanation for any similarities and differences.

7.2. From bureaucratic control to where?

Control relations are not historically successive or exist in pure forms as the proponents of the theories above perceived but rather various control mechanisms often co-exist in mixed forms. Control systems in each firm may consist in a combination of various control mechanisms one out of which is dominant over others. For example, bureaucratic control systems were predominant under the former public monopolies of the telecommunications industry. These bureaucratic control relations have co-existed in a craft control, self-direction or autonomous responsibility. Bureaucratic control systems in the telecommunications services industry may be different from those in manufacturing, particularly the car industry. Bureaucratic work control systems in the car industry are believed to be closely associated with mass production systems which are rationalised and Taylorised. Those in the telecommunications services industry are linked to mass service production systems but not based on rationalised work systems. Bureaucratic work control systems in the telecoms industry are more related to self-direction or craft control than rationalised work control. As indicated in Table 7-1 below, bureaucratic control systems emphasise compliance to basic rules and therefore require detailed reports to confirm whether employees are compliant to standardised

rules or not on the one hand. These systems give substantial discretion of work control to workers in term of work pace, work methods and work scheduling on the other hand. As a consequence, workers have significant autonomy and responsibility for their job and tend to identify themselves with managerial objectives. However, the levels of quality of service or customised services have remained low under these systems. Bureaucratic control in BT was different from that in KT in that many rules in BT were products of negotiations between BT and the unions, while all rules in KT were made by the government or management. Constraints in KT were the lack of the workforce, especially the skilled workforce in the context of a rapidly growing economy.

Under global pressures changes in national telecoms governance regimes and new management strategies associated with them may lead to alterations to bureaucratic control systems that may be a different mixture of the existing control mechanisms or a new mixture of control mechanisms, depending on the degree of corporate restructuring, what sort of strategies management takes, or what the phases of restructuring are. Newly emerging control systems may be a hybrid or a new form of control systems. BT has transformed its former bureaucratic work control systems into new ones, while KT is still in a transitional period away from the existing bureaucratic control systems to another.

To address new forms of control mechanisms that could emerge in the processes of corporate restructuring, we may conceptualise 'soft control' and 'hard control'. These concepts of control are designed to secure employees' compliance, conformity or acceptance rather than commitment. Although management often claims to empower its employees to elicit their commitment to management objectives, the reality does not correspond to the claim. Truss et al's (1997) argument that even if the rhetoric of HRM

is 'soft', the reality is almost always 'hard', proves this. Legge (1995, 47) also points out that there is little evidence for the widespread application of 'soft' HRM model but there are only opportunistic responses to a new socio-economic situation, often dressed up in a 'soft' HRM rhetoric. What is often mistaken or dressed up as 'soft' HRM is not a new approach to labour management with internal consistency but may be an important variant to 'hard' HRM. Insofar as 'hard' HRM and 'soft' HRM may, in fact, remain different variants to 'low road' strategies, these variants may be defined as 'hard control' and 'soft control' when it comes to work control issues. The two control mechanisms of 'low road' work systems differ from high commitment ones in the sense that employees are given little discretion or trust, and therefore, accompanied by various means of control. In general, quality production or quality of service is supposed to be strongly associated with high commitment strategies, while volume production is linked to cost-cutting/low trust strategies. This is not necessarily the case when we look at work control strategies closely. For example, Frenkel et al (1998) identifies a hybrid form of work organisation called 'mass customised bureaucracy' whereby management continually attempts to reconcile two conflicting principles: standardisation of processes and customisation of products in their study of call centres. Customised service can go hand in hand with low trust strategies in some instances.

Of more importance are the significant differences within broad 'low trust' strategies that are assumed to be inherently consistent. The differences within 'low trust' strategies can be conceptualised as 'hard control' and 'soft control'. Although the two control systems share some commonality in seeking compliance from the workforce, they show differences in the nature, the methods, the extent of the closeness or density and the areas of application, of control. The two can either be distinct

alternatives to each other on their own, or be sub-strategies within broad 'low road' work systems. We can characterise the ideal forms of the two control strategies as below.

Another way of changes to work control systems in the restructuring processes is adjustments of the existing control mechanisms to new environments in order to accommodate pressure for changes. In these adjustments, certain control mechanisms may be strengthened but others may be weakened. The mixture of control mechanisms may change or new mechanisms may be added to them as can be seen in KT later. Hybrid forms of control systems may emerge in the transitional period from public monopolies to private or partly privatised firms in a more competitive environment. These systems may take some elements of hard control or soft control but not in complete forms.

Table 7 – 1 **bureaucratic control, hard control and soft control**

	bureaucratic control	hard control	soft control
areas	loose control over quantity, quality and processes	quantity and quality control, process control	quantity and quality control, process (behaviour) control
approach to work	compliance to rules, significant discretion	coercion/tighter monitoring little discretion hands-on	coaching limited discretion hands-on / hands-off
facilitator		new technologies	consultants
methods	detailed reports standardised rules self-direction or craft control	statistic (targets), comparisons, threats, linkage to rewards	observations, interviews, incentives, helps
conseque-nces	reduced uncertainty, workers' autonomy and flexibility, identification with managerial objectives low quality of service	increased efficiency, frustration and much stress of employees, reduced autonomy tacit resistance/quick fixes	enhanced acceptance of managerial policies increased level of services, employee satisfaction loosened hard control

7.3. Work Control in BT: hard control versus soft control

7.3.1. Former Work Control Systems in BT

According to Batstone et al. (1984), BT had traditionally controlled labour by bureaucratic rules agreed through extensive negotiation or consultation arrangements with the unions. There was little unilateral imposition of control over day-to-day operation of work. Management increasingly attempted to gain control with little success as a new commercial paradigm emerged and new technologies were introduced in the 1970s. There was a basic contradiction between 'efficiency' sought by commercially oriented management, and 'consent' sought by traditional co-operative approach for reliable service and smooth modernisation. Management's push to reconstruct labour relations in accordance with commercialism was mitigated by 'political contingency', the unions' resistance, and management concern about uncertainty arising from the undermining of the hitherto consensus (Batstone et al. 1984: 162).

However, the pendulum swung to management with the privatisation of British Telecom in 1984, tougher regulation and increasing competition. Management soon began to reassert their right to manage and imposed their initiatives on the workforce in order to pursue their aims. Until the implementation of 1991 'Project Sovereign', management did not regain much control over the workforce. The unions still possessed the potential power to resist or delay management initiatives through protracted negotiations. Management began to hold tighter grips on important aspects of work relations as an essential part of various reorganisation initiatives. New technologies were instrumental in the process of transition to greater control. Culture changes from a traditional public service ethos to a customer-oriented one helped the shift away from

more consensual, rule-bound control towards an increasingly management-imposed one. From 1992-3 onwards management strategies to minimise costs and to provide quality of service have led to tighter control over work than before. Despite its substantial power to resist, the union still preferred 'negotiated changes' to outright opposition to management's new initiatives. Management responded to the pragmatic attitude of the unions by keeping most bargaining and consultation arrangements intact, in so far as management could achieve the reforms they wanted to introduce.

As such, BT has developed different control strategies whereby they can exercise effective control over labour in terms of work volume, time, work quality, and employees' behaviour. These various and mixed mechanisms of control can be explained by such new concepts as 'hard control' and 'soft control' rather than the existing control models.

7.3.2. Hard control in BT

Control over Work Volume and Time

Until 1992 – 93, field technicians' work was subject to manual control. Senior Technicians (STs), the highest grade in the field technician hierarchy had a supervisory role of allocating and prioritising jobs, helping technicians, and monitoring job progress. Line managers rarely intervened in technicians' work directly, were usually office-bound, and were doing routine paperwork. Field technicians, composed of mostly TIIAs (Technician IIAs) and some TIs (Technician Is), had a significant autonomy in prioritising and scheduling jobs.

However, from around 1993 and 1994 BT began efforts to control technicians' work time and volume by standardising work procedures and processes. The launch of

the Work Manager (WM) has significantly changed work control in the field. The WM system basically deals with job allocation and scheduling by controlling work speed, progress, punctuality, job closures and communications with technicians via remote handheld terminals. The system plays a prominent role in identifying the kinds of the jobs, the skills needed, commitment time, job priority, the estimated time to complete the job, and the travel time. The WM also enables BT management to control work performance. The system has textualising capacities of recording and keeping all information regarding field technicians' work, and then produces a great deal of statistics concerning work performance in printout forms called "Work Team Members Day". Field Managers (FM) are aware of exactly what their technicians did and how well they did their jobs by scanning down the reports. Additionally, the Field Performance Office that supports FMs, generates 'Scoreboard Reports' on overall performance of their team and their field technicians, which identify the potential areas for improved performance (BT. 1996b). The statistics on technicians' performance are often compared with those of other technicians within the team, between teams within the site, and between sites in the form of various league tables. The worst performer within the team, the worst team within the site, and the worst site within the business unit are often openly 'named and shamed' with negative performance recorded for the responsible manager.

With customers' growing expectation of service quality and punctuality of service delivery, BT needs to provide services within a committed time. Control over punctuality can be translated into work speed or time control. STs in the control centre keep their eyes on how much time each job takes and ensures that the job is finished within the committed time. If a technician spends more time than 'Quality Task Time'

(QTT), a standardised time for each job, STs in the centre could see and raise the alarm. If the field technician fails to repair the fault in time, the job goes to the automatic 'Jeopardy Management System'. STs send a message to another field technician with much spare time until the committed target time. The next job will be allocated to the technician available. The FM will make an 'Exception Report' against the relevant technician unless the technician reports back to the control that he had some special difficulties or others. This punctuality control tends to speed up field technicians' work.

The much closer performance control as described above has often led to the 'quick fix' of faults that means tinkering with faults so as to enable cables or lines to work temporarily without rectifying the ultimate causes of faults. The practice of 'quick fix' became more conspicuous because the old network was prone to faults due to poor joint closure of cables. The bad practice developed while field technicians were pressurised to do as many jobs as possible, ignoring quality of work. The result was that there were a good deal of recurring faults. BT management acknowledged that they had sent mixed messages about their expectations of technicians on quality and quantity in seeking to fix faults quickly (BT. 1996b). To address 'quick fix' practices BT had to bring in another control mechanism, control over work quality, which tended to make the matter even worse.

The combination of automatic job allocation by WM, QTT, an increase in effective time, and control by comparison tends to enforce field technicians to undertake more jobs within a certain time. These various means of performance control were designed to more fully and efficiently use field technicians' time and capability. According to one personnel manager responsible for the access network, the statistics on performance were produced in such a way that

> every aspect of work or performance had four or five measures attached to it, and that the collection of the statistics became a thick book.

There were too many statistics, tables and league tables. BT has begun to realise that those measures have not become productive because they do not represent the truth.

Until the early 1990s there was no significant attempt to control CSRs' work. The activities were completely reactive ones to customers' demands and there was no proactive selling. CSRs' work was much looser and slower than now, and managers only had to check around 10% of the work done on paper. Despite partial computerisation underway, much clerical work was done manually until the late 1980s.

Work control gained momentum when management consolidated customer service functions that had scattered across the country into separate '150' or 151' CSCs in 1992 - 3. New CSCs were equipped with CTI (Computer Telephony Integration) and RT 1000. These systems have their built-in abilities to textualise and visualise CSRs' work and their implications for work have been much debated in recent call centre researches (Frenkel et al. 1998; Taylor and Bain 1999a; 1999b; Kinnie at al. 1999; Knights et al. 1999). BT's cost-driven strategies take full advantage of the textualising and visualising potentials made available by new technologies in order to monitor CSRs. The main pillar of work control in CSCs is the CTI system that automatically and continually feeds the stream of calls to CSRs available like a conveyor belt and reduces wrap up time. Moreover, the deliberate match of the minimum number of CSRs to the average number of calls at national level is designed to reduce small spare time between calls. Textualising capability (Zuboff. 1988, 316) to record and analyse comprehensive data on every detail of work processes, enables BT to closely monitor and enhance CSRs'

performance. The systems produce an 'Agent Trace Report' detailing CSRs' work virtually by minute on a daily, weekly and monthly basis. Another effective controlling device in CSCs is 'RT 1000', a system is linked to CSS and CSR's telephones on both ends. The visualising capability of 'RT 1000' allows management to keep CSRs under constant surveillance in real time (Finney 1996). Each CSR is identified by his/her pin number that is inputted in when work starts. There are a number of code numbers to be typed in when CSRs do something else other than taking calls. The manager can then monitor on his/her computer screen what each CSR is doing. Visualisation via RT 1000 has been used to force CSRs to work more and harder, while reducing their discretion.

CHT, the average time spent on taking a call, has been a means of controlling work time. In 1993 – 4 'CHT' had been about 360 seconds per call and then it went down to 260 seconds per call, and now it has gone up slightly to 275 seconds because of the selling aspect. The trend in 'CHT' shows how statistical means of monitoring can be used to intensify work. If employees perform badly, they may be subject to a discipline or 'Poor Performance Procedure' (PPP). It creates more stress and panic. PCA was adopted as a measure of checking service quality. An increase in PCA has reduced short spare time between calls, which was legitimised for customer convenience. Effective time is the time during which CSRs are available. There is a target of 9% on the ineffective time. Going over this limit can result in a verbal warning, and then maybe the PPP. The focus of BT's control in CSCs has been on work volume, speed and time and later the amount of sales. Another area of control is selling. CSRs are required to sell as many service products as possible. Selling in CSCs that had at first been voluntary has become a requirement for CSRs and really another measure of performance (CWU Voice July 1998). CSRs may receive a 'gift voucher', depending on the amount of sale

beyond targets unilaterally set, often unrealistically by management.

Statistical control is also applied to teams and CSCs. According to an internal document (BT. 1996a), BT produces 13 different kinds of statistics for teams within each centre and for CSCs within the business unit, for example, CHT, PCA, Sales volume, Quality, Care and Complaint Handling. Targets are basically set for each CSC and then broken down to teams and individuals. Comparisons are made through ranking individuals within each team, teams within each CSC, and CSCs within the entire units in terms of league tables by each target, and as a whole. As their bonus is linked to whether they hit the targets or not, site managers tend to put pressure on CSRs via team managers to meet the targets. BT management admitted that control emphasising on quantity produced a lot of problems with people management in CSCs: too many performance measures, unrealistic targets, and performance comparisons in terms of statistics; insufficient time for paperwork/ reading; and resource problems (BT. Nov. 1997: 29).

Since 1990 BT's incessant cost minimisation strategies, subsequent large scale redundancies and various exercises to push up productivity have led to tightening performance control in terms of work volume and work time. BT management has developed a number of control methods, greatly facilitated by new technologies. Statistics relating to various aspects of work performance have been used to monitor and drive up performance of CSRs and field technicians. Other methods include technical control over work processes by job allocation technologies, control over punctual service delivery, and control by comparison shown in league tables. Paradoxically, the proliferation of statistics has not increasingly worked as effectively as they hoped. The combined effects of these various work control mechanisms on

workers have been quite harsh, unbearable, and stressing, in a word, 'hard', which has been expressed in exhaustion and high levels of sick leaves and high labour turnover rates. Despite significant improvement in productivity, the mounting pressures of 'hard control' have resulted in other problems such as low service quality or recurrent faults that must be addressed.

Control over Quality

Quality of service or work quality is believed to be linked to high commitment strategies to help induce the co-operation and commitment from the workforce and therefore, employees are supposed to be given responsible autonomy. However, differing from the claim above, major quality control exercises in BT were introduced to address quality problems arising from the emphasis on control over work volume and time. Quality control goes hand in hand with quantity control in most cases. Here quality control is meant by 'control over quality of work' as well as quality of service.

As touched upon earlier, BT's drive to cut costs and to increase productivity made field technicians cut corners. The rate of repeated faults were reported to be quite high. To improve quality of work and thereby reduce operational costs, BT set standardised work procedures and processes through 'Field Effectiveness of Quality' (FEQ) programme in around 1993 to ensure the quality of work. For BT, 'quality is simply compliance with requirement of the standardised procedures and processes already set' (BT. 1994b). Before 1993 much was left to managers' and workers' discretion with few requirements for work procedures and processes to be conformed with.

As part of the 'FEQ' programme Field Managers (FMs) were introduced in 1993/4 to replace the former field managers. FMs are supposed to spend 80 percent of their

time in the field supervising technicians in order to ensure that technicians conform to quality standards in terms of the work procedures and processes (BT 1994a). FMs' in-progress quality control is concentrated on whether standardised work procedures are observed by technicians at the appropriate stages of installations or fault repairs. In front of many local contingencies, these standardised work procedures and practices to ensure quality of work often turned into rigidities for field technicians who needed some discretion meeting local requirements.

A variety of other measures were taken to check whether field technicians would comply with the standardised work procedures and practices. The comprehensive data-set called 'Scoreboard Reports' covering both 'quality' and 'quantity' provides FMs with a dashboard by which the overall operation can be monitored (BT. 1994b). More significant was the initiation of quality checks by independent auditors with the rollout of the 'FEQ'. The audit system was specifically aimed to address quick fix problems because a lot of bad plants and bad practices were not picked up by FMs. BT pushed the auditor arrangement to monitor field technicians' work quality in a harsh, follow-up checking way for a couple of years. The system brought in the linkage of 20 percent of FMs' pay to quality. If any 'Critical Defects' found in work completed by his field technicians, the FM would lose a proportion of up to 20 percent of his pay. The linkage of quality failure to FMs additional pay were used as a penalising tool and led to a management style reminiscent of "big brother watching over your shoulder with a big stick". Many field technicians complained about a good deal of formal or informal warnings, threats of discipline, harassment and bullying by FMs concerning critical defects. The audit system linked to the additional pay scheme for FMs was universally hated by FMs as well as field technicians. The system did not work in a way that it

should have worked. BT finally decided to withdraw from FMs' additional pay scheme linked to Critical Defects in April 1998, though the audit is still running in a softer way.

BT management exercised a form of 'hard control' in the field by requiring field technicians to conform to standardised work procedures, introducing FMs tracing field technicians, linking quality of work to FMs' payment systems and using the audit arrangement as a punitive tool, and therefore getting FMs to threaten or bully field technicians.

Service work in CSCs is featured by three-way relationships between workers, customers and management. As interactive service work in CSCs is simultaneously produced and consumed, control over quality of service leads to particularly invasive forms of workplace control which oversees areas of workers' personal and subjective features (Macdonald and Sirianni 1996). Until 1992 BT did not really care about how CSRs treated customers. According to the interviewees in CSCs, it was quite common at the time for CSRs to cut calls off, when customers became nasty or abusive, though it was not publicly said. As competition increased, BT has turned to quality of service and specifically how their CSRs are talking to customers.

Emphasis on quality in CSCs is concentrated on behavioural control, how CSRs are required to behave so as to satisfy customer needs when they talk to customers. The most common form of quality control has been 'remote monitoring'. When CSRs spoke to customers, their managers secretly began to listen in on their calls. The remote monitoring practice was first introduced in CSCs for business customers in 1992 and CSCs for residential customers later. Managers are required to listen in to calls by sitting alongside or remotely a number of times a month for each CSR.

Remote monitoring has evolved into the 'Moment of Truth' (MOT) whereby

managers record the conversation that their CSRs made with their customers. The manager highlights good and bad points of the conversation recorded, and then offers the suggestions of how to improve customer satisfaction or sales. Management has devised simple routinised scripts for how to sell service products and to answer questions. Depending on how well CSRs deal with customers, they are assessed into one of 5 MOT scores (Dazzles: 1 point, Exceeds: 2 point, Addresses: 3- 4 points, Fails: 5 point, Avoids: 6 points). These MOT scores were linked to the incentive schemes whereby CSRs are able to accumulate SIS selling points according to the amount of sales. CSRs could then redeem those points for vouchers of up to the value of £ 200 a month. However, If CSRs got bad MOT scores, they could lose SIS points and the vouchers. The linkage of MOT scores to SIS points became an important source of complaints until 1997. BT broke the links between the SIS points and MOT scores because it was seen as a punitive measure.

Remote monitoring has created mistrust between CSRs and management, though management claims that its key purposes are to coach CSRs and to enhance their skills by providing constructive feedback for them (BT. Aug.1995). CSRs, at first, felt very much offended by the remote monitoring. As time moved on, remote monitoring has increasingly become incorporated into daily working lives and the resistance to it has declined. Overall, it has remained a very emotive and sensitive issue in CSCs, combined with an intimidating management style.

Quality control was designed to address the problems of poor work quality or low quality of service. The major quality initiatives have been FEQ and the audit system in the field, and 'remote monitoring' and 'MOT' in CSCs. These initiatives have

contributed to intensify monitoring, to limit workers' discretion, and to chase workers. According to FMs and field technicians, management attempts to link quality control to FMs' additional pay schemes or to CSRs' voucher schemes brought about some serious consequences such as field technicians' hatred of FMs and auditors, lots of complaints about fairness, and a very aggressive management style. Line managers and workers (field technicians and CSRs) blamed each other for the loss of FMs' additional pay or voucher and management style. BT at last had to give up some of its hard nature of quality initiatives, that is, the additional pay schemes for FMs and the linking of MOT scores to voucher schemes for CSRs. As the quality control initiatives in BT do not come from high commitment strategies that allow employees discretion, they rather furthered the hard nature of workplace control.

Workers' responses to Hard control

The intensifying hard nature of work control has given rise to individual or collective example of, explicit or implicit, resistance or avoidance. Field technicians' 'quick fix' practices cut corners in order to increase the number of jobs completed. CSRs also tend to pass more calls to the next level in order to get on to the next calls, take more calls and sell more products and services, as evidenced by the staff in Credit Management function. These are 'making out' and 'escape' behaviour of workers' five survival strategies (Noon and Blyton 1997: 164). Collectively, the 1997 London field technicians' strike was the first major evidence of resistance to BT management after the major strike of 1987. Although the cause of the strike appeared to be the abuse of contract workers in the field, the accumulated workers' frustration and intensified pressure arising from practices associated with 'hard control' were one major reason

behind the strike. The strike led BT management to change its management style to a softer form. In 1997 there was a open protest by clerical union members against BT management style at BT Headquarters, because CSRs were increasingly under pressure to work more and quickly. Close and hard control over CSRs led to a one-day national strike in Nov. 1999 that was staged by the CWU in order to protest against repeatedly broken management pledges concerning improving staffing levels, management style, agency staff and unachievable targets. The strike in CSCs has brought about some improvements in staffing levels, targets (collective rather than individual) and management style.

There was also a lot of opposition and resistance to remote monitoring. The union concluded an agreement with the company about a national procedure for monitoring and recording: As such 'The Code of Practice for Call Monitoring' for employees involves notification of remote monitoring and recording in advance with results used for coaching and counselling (BT. Nov. 1996).

Apart from the explicit resistance or avoidance, there have been a number of implicit forms of passive responses from individual workers to the constant pressure and monitoring. High labour turnover rates in CSCs and what people call 'burnt-out' of an average six months into employment in telemarketing centres are another sign of individual workers' passive resistance to the harsh control. According to the CWU (Feb. 1998), turnover rate in CSCs that had been around 5 percent in the late 1980s and early 1990 became around 15 percent per annum, which was higher than that in other part of the organisation because of undue stress arising from high targets. According to the union branch officers interviewed, CSRs' absenteeism due to sick leaves has been highest in the firm in recent years. Sick leave resulting from depression and stress had

been very unusual in the past but now it has become usual.

The union has argued that quality of service can be provided only when employees are given more autonomy, dignity and trust than close control, and that BT would suffer from low quality of service arising from 'hard control' and strong cost-cutting exercise.

Consequences of Hard control

'Hard control' over quantity and quality as seen above seems to have had significant consequences, positive and negative, in terms of productivity, management style, employee morale, working conditions, and the power relationship between employees/the union and BT management. 'Hard control' to step up improvements in productivity and quality of service, helped by new technologies, has led to quite impressive results, despite a lot of negative repercussions on employees. For example, BT has 40 per cent fewer field technicians than in the late 1980s, though the increase in productivity from new technologies and work rationalisation has been significant. The emphasis on quality has reduced the number of recurring faults to some extent, which has in turn brought down the amount of repair work. The productivity improvement in '150' CSCs are even more striking. Yet, the improved results do not solely arise from various forms of 'hard control' but also from the combination of standardisation, computerisation, and task flexibility.

Table 7 - 2 **Productivity in '150' Customer Service Centres**

	1990	1997	increase
Call volume (a week)	320,000	1,300,000	306%
People (full-time equivalent)	2,400	5,300	121%
Productivity (calls/people/week)	133	245	84%
Service level	Poor	80% PCA	

Source: BT. 1998. an internal document

Note: '150' CSCs deal with calls regarding billing enquiries, services product enquiries, complaints and sales. PCA (Percentage of the called answered within 15 seconds)

However, underlying these impressive productivity improvements has been a macho management style, declining employees' autonomy, stress, demoralisation, and shifting power balance towards management, which, taken together, represent radical changes in work control systems in BT. These changes are associated with BT's relentless cost-cutting exercises, job cuts and radical corporate restructuring in the 1990s. During the transformation, line management has found itself at the workplace aggressively pressing workers to achieve high targets. The new assertive management style is epitomised as 'cop' among managers as well as employees. As management persistently watches over them, employees are forced to work harder. If they do not perform to the level expected of them, poor performance becomes evident straight away. According to the stress surveys conduced by the CWU clerical regional organisations (1998), 88 percent of CSRs said that they have not had autonomy in their jobs. Not only have technicians and CSRs been allowed little discretion but also first-line managers do not have much autonomy. Since there is nowhere to hide, heightened pressures have led to unbearable stress. The surveys show that 84 – 90 percent of CSRs replied that the most stressful aspect of their job was unreasonably high targets. Many employees felt frustrated and demoralized when they were hard pressed to work beyond their mental and physical limits.

BT management, to an increasing degree, has imposed new initiatives on employees in order to reform work practices without consultations or negotiation with the union. It has often threatened to implement their plans unilaterally if the union attempted to block them. The power relations between the union and management have gradually shifted towards management. The shifting power balance and the assertive

management style have accompanied, and have been accompanied by, 'hard control'. However, BT management began to notice that 'hard control' alone is neither workable nor viable. The fact that prevailing 'hard control' was no longer able to improve their performance beyond certain limits was confirmed by the results of the annual CARE surveys. There should be something alternative to, or supplementary to, 'hard control' for BT management to rely on. That is what we will call 'soft control'.

7.3.3. Soft control

Distinct from various forms of 'hard control', 'soft control' methods seem to have emerged in BT since the mid-1990s. As BT management has realised that the imposition of various form of 'hard control' on employees was not workable and produced negative consequences, 'soft control' as an alternative system of control to 'hard control' has been adopted. The two main methods of 'soft control' are identified and examined concerning how they have been used.

Empowerment

One important initiative associated with 'soft control' is 'empowerment' exercises. In most of the existing literature, empowerment strategies are supposed to be the major alternatives to, and qualitatively different from, work intensification strategies. Here 'empowerment' is presented as a soft mode of management control within a broad low commitment strategy. At first, a programme called 'For a Better Life' was initiated in CSCs in around 1995 and then Network & System Division developed its own programme, 'Investing in Our Future' in 1997. The empowerment exercises are aimed to encourage and give BT staff more responsibilities for their actions allowing staff to "Own, Decide and Do" what they do. First-line managers are instructed by their senior

managers in this way,

> "Don't tell them (workers) what to do but work with them to try to improve what we do and encourage people to take responsibilities for their own jobs."

The Network and System (part of BT responsible for the network) version of empowerment is called "Investing in Our Future". The main points of the empowerment initiative are summed up in a personnel manager's words as follows,

> It is aimed at encouraging people to get involved and related to the work and trusting them to do the work without managers standing there with the stick all the time and beating them into submission. It was all about changing management and convincing our people that we would change the way we do business.

It is claimed to be all about going from 'command and control' to 'standing back with managers' hands off and letting people work without direction. There are many field team workouts where field technicians get together with their coaches and start looking at ways they might invest in their future and make a change. However there have been some difficulties in implementing empowerment. One personnel manager on the access side stated;

> There are some managers who will resist it because that's the way they have been. After years of the only way we were convinced it ever worked, if you were on the case the whole time of probing, asking question of, directing people and never letting them think for themselves, it is very difficult to stand back and let them get on with it.

However, the problems facing the empowerment initiative arise not just from managers' inertia in managing people but rather from inconsistencies and contradictions inherent in management strategies. Even if management proclaimed to empower people, field technicians are still subject to close control via rigorous statistics and checks. Field technicians are not entrusted to have, any significant autonomy over their work. Their

work schedules are still tightly controlled by the WM even after the "Investing in Our Future" initiative.

'For a Better Life', a declared empowerment programme in CSCs has allowed people to make decisions on what they sell and billing. In the past there were tight financial limits concerning what they could do when there was a dispute about the bill. CSRs had to ask their immediate boss to make any decisions when the bill was beyond a certain limit, e.g. £5. Every minor problem involving money should be referred to the manager. This situation has led to an unnecessary workload for the manager and to inefficiency. Now they do not always have to seek guidance from their manager. In most cases employees' discretion boils downs to their ability to waive customers' controversial bills. They could write-off or discount bills on a good will ground or whatever, as long as they could keep customer happy and stop them going to other competitors. BT has sought to make sales people almost like sale reps in the way they deal with customers. Empowerment is also deployed from management's needs to reduce workload and ensure work is undertaken effectively. Although there is a small degree of empowerment, some people, especially young people who are enthusiastic about it, are always keen to take on more responsibility, and have ownership of what they do. BT has taken advantage of these people to a much larger degree.

According to the logic of empowerment, when employees deal with customers, they are supposed to own the problem, and to decide what is required and they should do it. However, BT's claim that they have empowered CSRs is not very well supported by evidence. CSRs still have to get their manager's permission for any concessions or arrangements they make concerning their customers. There are grey areas in which they

cannot make judgements. Empowerment initiatives have been well received by many CSRs but not by all, especially people with long tenure. Despite the rhetoric of empowerment, the extent of employees' discretion and autonomy of how to perform their work is fairly limited in practice. The limited degree of empowerment is due to different interpretations of the grey area among managers where CSRs cannot judge issues themselves.

The half-hearted, partial nature of the empowerment implemented in BT falls much short of the vision of empowerment as a distinct strategy, becoming rather a variant of a low trust approach. It also results from the fact that the empowerment initiatives have not been strong enough for employee discretion to roll back. First-line managers who were once accustomed to commanding their staff tend to continue to work in a more or less similar way, even though their senior manager emphasises a shift towards the new empowerment. Management continues to rely on hard forms of control such as statistics, remote monitoring for performance measurement, though in more diluted ways.

Coaching

The appearance of 'coaching' as a management tool in BT heralded an important change in existing forms of 'hard control'. The change of a symbolic term denoting management style away from 'cop' to 'coach' suggests that management has tried to shift towards a softer style. BT managers are required to officially become 'coaches' rather than managers. 'Coaching' was at first put into practice in around 1995 in CSCs with the help of a consultant. But it was not until 1997 that the initiatives really gathered pace across the company. Coaching has been suggested to do things in different ways.

The concept of 'team working' was introduced with the concept of coaching at the same time. Managers as team leaders are urged to motivate, lead, and encourage employees to do their jobs right by getting rid of obstacles to work and helping them solve difficulties in front of them. At first it was a big shock to BT managers since the approach is quite different from the command, control and threat style up until that time. The changes away from control towards support/coaching in the approach to people management had has somewhat filtered down through the organisation from senior levels to first-line managers.

Up to the mid-1990s duties, which FMs had been performing, in general were to carry out the instructions of the higher managers and to press field technicians to do their jobs. Some of them have tried to change the culture and to become what they call 'coaches'. In some parts of the business some positive changes have happened. Each FM referred to as a 'coach' leads a team of field technicians. According to the FMs interviewed, they are trying to change their mentality and culture in the workplace.

However, they are still responsible for their team performance. FMs are assessed on the basis of monthly statistics and their performance is compared with each other. The worst performing FMs sees his manager having to submit a report to the level 3 manager on how to improve his team's performance. Fluctuating management emphasis between coaching and high performance sends managers and workers confusing signals. FMs themselves do not have much autonomy and are tightly managed by their own level 2 managers. 'Work team' is just another name for a group of field technicians under one manager. Work team members that work individually scattered in the field meet each other once a month or so, which means that they have little chance to talk

about their work. There are no other HRM practices that reinforce coaching in a more systematic way, apart from just two so-called empowerment exercises of the same kind. Not only does 'coaching' fall much short of eliciting employees' consent and commitment but it is often contradicted by the continuing pressure for higher performance in terms of work volume and speed, and work quality.

In CSCs the concept of 'coaching' was introduced in 1995. Here have been more positive interventions from managers in CSCs than they used to be. In general, most of the managers in CSCs are now more prepared and more willing to intervene to assist people and to tell them how to gain improvements. As long as it is carried out as a tool not of control but of coaching, and used in the right way, remote monitoring may sometimes actually help people. As the manager can pick up on where the CSR is going wrong, record the conversation with customers and play back to the staff concerned, problems can easily be identified and better ways of conversation with customers can be suggested.

However, a lot of 'coaching' comes down to the capability and propensity of individual managers. Some managers seem to be more enthusiastic about 'coaching' but the others are less so. There is so much pressure on first-line manages to improve work performance from their managers. CSRs supposedly work as a team under one coach (manager). Each team has to compete against others in terms of work performance. Most staff do not like teams because the teams often put people under a lot of pressure. 'Coaching' has often not been very well received by CSRs because where a worker had a 'coaching', it means that he/she was not achieving the targets. The worker is seen to be at the bottom of the league because he/she needs coaching. Many CSRs still

perceive that their managers actually direct them. In this regard coaching is not consistent across CSCs.

In CSCs the management approach has been a mixture of both 'cops' and 'coaches'. The reality is not always the same as the rhetoric. Managers in CSCs do not often have enough time to coach and listen to their team members because they are so busy doing other things. There are still a lot of directions, bullying and cajoling. Some personnel managers in CSCs interviewed seem to attribute the inconsistencies in implementing coaching to junior managers' slow re-adaptation to the new changes. Although it may be recognised that a large company like BT cannot change its way of managing people overnight, there is little compelling evidence that the change towards the new way of managing people has really begun to take place.

Consequences of Soft Control

The two modes of 'soft control' above were introduced to more than merely counterbalance any of the negative effects that 'hard control' has brought about, and to shift away from the hitherto hands-on approach to a hands-off one. These softer forms of control, where they are implemented as intended, have been generally well received and accepted by BT employees in both the field and CSCs. Most staff in the field and CSCs assess 'coaching' in a positive perspective. They also welcome the empowerment initiatives and appear to have enjoyed some discretion given to them. Where these initiatives associated with 'soft control' were successfully implemented, passive or negative outcomes that 'hard control' has brought forth have significantly reduced. They have also helped employees see management policies in a positive eye, sometimes be willing to take responsibilities in undertaking their tasks.

However, there are a number of interlinked factors that prevent management's rhetoric from becoming a reality. While these initiatives went down the organisational hierarchy, the focus and the real extent of them were often watered down at the workplace level. Junior or middle managers' inertia originated from the old way of control, that is, 'hard control', has played its part. Management's prior consideration of profits and the pressing need to minimise costs that arises from both shareholders' expectation of greater profits and rapidly changing markets have rendered management priorities inconsistent by making them oscillate between 'hard control' and 'soft control'. This has furthered suspicion among employees of those management initiatives associated with 'soft control'. In their eyes these initiatives might be seen as management fads that would soon fade away. Moreover, the lack of other practices reinforcing or complementing these softer practices is the last important factor that has made the initiatives remain management's only hope. Therefore, empowerment and coaching have not reached a new distinct strategy but have remained a 'soft control' as a variant to low commitment strategy.

7.3.4. The Implications of Hard control and Soft control

'Soft control' and 'hard control' are mutually complementary in some aspects and contradictory in others. BT management has pursued cost-cutting strategies through 'hard control'. The budgetary limits set by financial considerations and pressures of having to show short-term profitability to shareholders have tended to force management to keep staffing level low and productivity level high. Line managers still have to achieve high performance targets, which drives the managers to push their people to work as hard as possible. This line of logic arising from a stringent cost-

cutting strategy is likely to produce the damaging physical and psychological consequences as explained in the section of 'hard control'. 'Soft control' reduces the negative effects of 'hard control' and loosens the density of control by taking into account human factors. 'Soft control' may thereby reduce the resistance of the workforce to various management initiatives, and enhance employees' acceptance of those reforms and initiatives. In this regard 'hard control' and 'soft control' may be complementary. However, the aims and consistencies that 'soft control' is seeking are easily undermined by continuous 'hard control'.

'Soft control' is aimed at getting compliance from the workforce by diluting resistance to, eliciting acquiescence about, or increasing the understanding of, the company policies or initiatives, while 'hard control' may try to bring about conformity or compliance to targets by fear or coercion. The control methods used for 'soft control' include some discretion given to employees, coaching and hands-off management, whereas those for 'hard control' are high targets, close monitoring, a good deal of statistics, comparisons and threats. These differences between 'soft control' and 'hard control' may explain the fact that 'soft control' can also be seen as a new way of work control, distinct from 'hard control'.

Differing from 'soft control', 'high commitment' approach requires a cluster of mutually interlocking and reinforcing working practices, which internally fit to each other in order to get the whole desired effects. Even though BT management has adopted the jargon of empowerment and coaching, the partial and incomplete nature of the practices, even undermined by 'hard control', is much short of an alternative control strategy, 'high commitment' one. 'Soft control' cannot replace 'hard control' but remains supplementary, and often contradictory, to the latter, and to be deployed with

the latter at the same time. 'Soft control' may be only seen as another sub-control strategy within a broad low trust strategy. It is the softer and more sophisticated forms and methods of control that are more effective and acceptable to the workforce. 'Hard control' and 'soft control' are a management strategy within a broad low trust approach, alternatively deployed depending on the circumstances and customer segments BT workers deal with.

Despite significant differences between the field and CSRs in terms of the nature, complexity, cycles and place of work and customer interaction, the extent to which management has implemented both 'hard control' and 'soft control' is generally similar in the two areas. However, some differences can be shown between the two. Field technicians work is geographically dispersed and their work cycles are very long and often unpredictable (e.g. 4 – 8 jobs a day), while CSRs work side by side in the open-space office and their work cycles are very short. In spite of the automation of job allocation and scheduling work in the field is still conducted manually and largely craft-based, whereas how CSRs work are much more tightly controlled by computerised systems. The degree of the closeness or density of control and statistical control, what we call the 'density of control', is much higher in CSCs than in the field. Quality control in the field is focused on work quality, whist quality control in CSCs is concentrated on behavioural control.

7.4. Hybrid Forms of Work Control in KT

7.4.1. Former work control

Rule-bound work systems, inherited from the past as part of the government organisation, dominated KT until the mid-1990s. There were fairly well developed

rules and bureaucratic culture that had governed KT employees, suitable for its hierarchical structure and firmly established order. The personnel arrangements including the internal labour market with a stratified grading structure supported the work systems. The rules were unilaterally set and changed by management or the government. The influence of the union was very weak and rather subordinate to the interests of management up to the early 1990s. The means to measure workload and outputs and to assess employees' performance were believed to under-develop. The shop-floor regimes governing the workplace at the time were ones in which management did not supervise employees in detail and substantial responsibility for work was left to workers in terms of how to work, job allocation, and work scheduling. Experienced senior workers led work in the field. CSRs at front-desks in local telecoms centres were reactive to the demands of visiting customers.

Until the early 1990s employees, conscious of public obligation, demonstrated a strong public service ethos and showed a significant commitment to the national goal of completing and upgrading the national telecoms network. A relatively high level of pay, the good growth prospect of KT and its associated potential for career progression further reinforced this commitment. In this regard, a relatively 'relaxed form of bureaucratic control system' had been in place at KT until the mid-1990s. As competition has developed in markets and management has pursued commercial strategies under its own initiatives, new demands for providing quality of service at a relatively cheap price arise.

7.4.2 Emerging Form of 'Hard Control'

With regard to work control, KT management has focused on cultural change as

part of enhancing quality of service rather than cost-minimisation in the late 1990s. KT management has increasingly been required to meet heightening customers' demands by focusing control over quality of service since the mid-1990s. The initiatives to change employee ethos have been sought by caring about customers' various demands. KT management has tried to improve customer satisfaction by intensifying control over quality of service but not necessarily by intensifying work. In the process of bringing in cultural changes towards customer-orientation and improving quality of service, a new form of 'hard control' has just emerged. The intensity, extent, and methods of control which KT management has imposed on workers particularly at various customer interface in order to deliver quality of service, have increasingly been hard in its nature.

The project representing the approach adopted at Korea Telecom is called 'FOCUS'. The ways in which KT has tried to improve quality of service are to provide services on time, at the right time and with courtesy. One of the features of the project in KT is to use customers in order to monitor whether or not employees provide quality of service. Quality of service usually depends upon employees' attitudes, the extent of courtesy, connectivity, the speed and punctuality of service delivery, and work quality (KT 1999a). Customer service quality is checked and controlled in the areas related to provision of service such as CSCs, front-desks, fault receptions, fault repairs and installation.

The project 'FOCUS', planned in 1994, has been implemented since 1997. The 'FOCUS' initiative has been applied to the directory inquiry centres, CSCs, front-desks, fault reception centres, and the field. There are around 60 agents at the FOCUS centre who make calls, 'Happy Calls' to customers having a transaction with KT the day before in order to monitor the degree of customer satisfaction with the services. The

'FOCUS' agents automatically make up to 3,000 phone calls everyday to customers drawn from the lists of the customers by using the computer system. FOCUS agents ask the customers 17 questions for each service addressing a number of activities related to service speed, courtesy, punctuality and quality of work. According to the answers of the customers to the questions, each relevant employee is assessed by 5 'FOCUS' grades and scores are given for each grade: very satisfied (grade 5 - 100 points), satisfied (grade 4 - 75 points), average (grade 3 - 50 points), unsatisfied (grade 2 - 25 points), and very unsatisfied (grade 1 - 0 point). The average points are then published and ranked in the form of monthly league tables for each function to compare FOCUS points other among employees in local telecoms centres, among the local telecoms centres within the regional division and nationally. Before 'FOCUS' points are marked and league tables are published, KT management set FOCUS target points for each service function to achieve in that year. The points that each employee of each function in local telecoms centres or each centre in regional divisions achieve, are assessed against the target points. Statistics are widely used for comparison on a daily, weekly, and monthly basis.

The project FOCUS is, above all, applied to the field where fault repairs and installations are provided by field technicians. Field technicians are supposed to provide quality of service according to the initiative of 'FOCUS. They have to arrive in the field at the right time in order to keep the appointments with customers, which were made at the control considering the workloads and situation in the field, and deliver services punctually. If an installation or fault repair service is much delayed, the customer is entitled to financial compensation from KT. Faults are supposed to be

repaired within 12 hours after the report to the fault reception centre. Line installations are made on appointment with the customer. They are supposed to install the line where the customer wants it to be, or possibly to install a couple of phones in different rooms when the customer wants this. They are required to perform quality work and to attach on the side of each phone installed a sticker on which their names and contact numbers are printed. They should clean the area where they worked. They are also supposed to test whether the line repaired or just installed is actually connected to the network. They have to explain to the customer what the customer questions or why the fault occurred in detail. However, if a field technician is to meet the customer's various demands, he may exceed the allocated job time and miss the next appointment. The time allocated for each job depends upon the situation in the field because the field technician is in charge of a certain small area. If it rains, the number of repair jobs swells. Then they have to hurry up to clear the faults within the day, often supported by a number of field technicians responsible for other jobs in the same local telecoms centre. When it comes to the spring season and people relocate a lot, the number of installation jobs increase.

The FOCUS agents call and ask the customer whether all the requirements above are met by the field technician and whether the customer is satisfied with the service provided. Therefore, field technicians are forced to carry out the tasks as careful as required above. Otherwise they will not get good FOCUS points.

The areas to which the FOCUS initiative is applied concern CSCs (call centres), front-desks and fault reception centres. CSRs at the customer interfaces of local telecoms centres usually deal with sales, billing inquiries, removals, and fault reports. Most customer services are still carried out by CSRs at front-desks in local telecoms

centres and partly at CSCs but in the process of transition away from front-desks in each local telecoms centre towards consolidated CSCs on a regional basis.

In CSCs all calls are supposed to be answered within nine seconds, and customer enquiries are required to be responded quickly, in details, and in a courteous manner. At front-desks of local telecoms centres CSRs are also supposed to deal with visiting customers quickly and courteously. At fault reception centres fault reporting calls should be treated in the similar way as at CSCs. Moreover, the recent emphasis on quality of service and customer satisfaction through the project FOCUS has brought about the shortening of the time within which calls should be answered from average 21 seconds to in 9 seconds at CSCs. The FOCUS agents call those customers who contacted CSCs or fault reception centres, or visited the front-desks in order to monitor the quality of service in terms of the speed of service provision, the kindness of CSRs' attitude, and the degree of their knowledge of products and services. The results of monitoring quality of service at CSCs, front-desks and fault reception centres by the FOCUS agents are assessed and compared in the exactly same way as described on the access side above.

The current CHT is 101 seconds and the effective time for CSRs in CSCs to spend to actually take calls per day is 265 minutes a day. CHT is going to be lengthened to 180 seconds and the average time for CSRs to actually take calls a day to 225 minutes. CSRs are going to be allowed more time in order to serve customers more satisfactorily. KT management does manage CSRs' performance at CSCs in terms of CHT or the number of calls taken a day, effective time (the time available to take calls) a day, and the number of sales to a certain extent but the emphasis has been put on quality of service. KT management has not imposed tight control over quantitative outputs on

employees. Significant differences between employees working in the same centre are continuously observed. There is no evidence to suggest that a hard form of output control is there.

If a local telecoms centre fails to achieve the target points in access network, front-desks or CSCs and is ranked as one of the poorest three performing centres, the tactics of 'name and shame' has been used. FOCUS points among centres within each region and nationally are publicly compared via league tables. The relevant first-line manager is summoned to report to the managing director of the regional division in front of his/her colleague managers why his/her section could not achieve the target and how to improve it. If the function in the centre consecutively fails to achieve the target and are ranked as one of the lowest centres again, the general manager of the centre as well as the line manager has to report to the managing director of the region in the same way. The managers of the worst centres experience humiliation and public shame. Then, the line manager is most likely to pick out the poor performing field technicians or CSRs and reprimand or warn them. If this kind of public disgrace happens to the line manager, the staff in the function would feel guilty for the disgrace and be often willing to accept being pressed hard by the manager in order to improve FOCUS points.

FOCUS points are also an important element in management assessment, reflected in differential bonus payments among regional divisions or local telecoms centres. The poorest performers or managers in terms of FOCUS points are selected and sent onto some training courses, often used for more punitive purpose (KT Marketing Division. 1998; KTTU 1999). In addition, the FOCUS team of the Marketing Division undertakes the auditing of the poorest performing local telecoms centre (KT Seoul Regional

Division. 1999). In these circumstances, line managers have tended to force line managers to cascade the hard pressure down to their subordinates. They tend to get tougher to, and treat, poor performers in a more heavy-handed way. So most of the staff are upset or depressed when they got grade 4 (75 points) or below because grade 4 or below will lower average FOCUS points in their section.

These various means of monitoring and enhancing customer satisfaction are aimed at controlling workers' attitude or behaviour towards customers, work quality, or punctuality and speed of service delivery. As indicated above, these tend to give birth to a bellicose management style. These various forms of enforcing control are aimed at getting employees to comply with the requirements for quality of service. The extent of monitoring, imposing the required attitudes towards customers on employees, and therefore supervising them is very hard, tight and aggressive. Thus there is strong evidence to suggesting that a form of 'hard control' has emerged with the launch of the project 'FOCUS' from late 1997.

In contrast to the evidence of the emerging 'hard control', 'soft control' in KT has been less conspicuous. A number of methods of 'soft control' have been used, which are not deliberately deployed with particular control objectives in mind. Education and training are the most often used methods of getting employees, normally poor performers, to improve quality of service. Every section manager holds the 'Good Morning' session every morning for 30 minutes. Here the manager repeatedly focuses on how to deal with customers and how to enhance quality of service. Repetitive emphases on the same may bring the sense of brainwashing and other pressing effects on the employees. However, these methods of training, education and the Good Morning meetings remain complementary to the hard form of control. They help to

reduce employees' overt or covert resistance to the control via the 'FOCUS' initiative and facilitate their compliance to the requirements of the FOCUS. Besides, few management practices such as TQM, coaching, team-working or empowerment that may be deemed as a means of 'soft control', have been imported. KT management uses the existing practices or channels to reinforce control in a softer way.

Responses of workers to the 'hard control'

The 'hard control' over quality of service has met resistance from employees and the union. The main points of what they argue against the FOCUS concern its objectivity, and the methods used for assessment and its subsequent legitimacy, though they do acknowledge the need to improve quality of service. The most frequently quoted are as follows: the subjectivity of customer satisfaction; problems with marking FOCUS points; customers' unreasonable demands for service; and the lack of technical and material conditions for consistent quality of service (KTTU. 1998). As a result of continuous questioning by the unions and employees, the union and KT management agreed to reduce the number of FOCUS grades from 5 to 3 in July 1999: grade 3 (satisfied); grade 2 (average); and grade 1 (unsatisfied). Employees at customer counters are likely to gain the FOCUS grade 3 more easily than before. However, the implications of the new agreement for the nature of work control remains to be seen.

Equally important is the fact that employees at customer interfaces, especially in the field, have invented some avoiding or resisting tactics against the tough imposition of the FOCUS initiatives. According to the technicians interviewed, some technicians sometimes manipulate the results when they report to the control. If any customer who may complain about the technician negatively, the technician may report to the control

the absence of the customer or the phone jack of the customer pulled out of the wall outlet when he visited the customer' house. In those cases the FOCUS agents do not make a call to the customer. The other technicians interviewed argued that high FOCUS points above 85 or 90 were impossible in the field, considering the situation of the field, unless the field technicians manipulate work results in one way or another. Considering that these practices were found even in interviews of the project teams of Korea Labour Institute, these practices do not seem be rare. Even though line managers may be aware of such practices, they appear to condone them. However, senior managers or FOCUS-related managers in the headquarters do not seem to know what is going on at the workplace.

7.4.3. Self-Direction and Bureaucratic Control

Apart from the emerging 'hard control' at customer encounters, there are many other areas where the existing control systems have not changed very much. Bureaucratic control systems in some areas of KT have gradually weakened but there are still strong elements of 'self-direction' (the lack of immediate external control) at the workplace. The basic structure of bureaucratic control is still quite persistent but on the defensive. Self-direction and bureaucratic control are the legacies of the former control systems rather than management's conscious control strategy. It is fundamentally different from self-managed teams or autonomous work groups linked to eliciting employees' commitment to the aims of the company. Work in the field is still largely craft-based in terms of work execution. Work at front-desks is also mostly left to the autonomy of CSRs. The reactive structure of work management in the field and at front-desks, which matches work volumes with the number of workers at the level of

local telecoms centres, reinforces self-direction of workers. Although employees are under clear rules and directions of immediate managers, their self-direction has remained a central part of bureaucratic control in KT.

Self-direction

Much work is still left to individual employees' discretion. Workers still have some discretion in work allocation and how to undertake their work. Except for control over quality of service, work performance is not tightly controlled. Despite the introduction of CTI systems with control capacity into CSCs, KT management has not sought to control work performance and processes. Craft work in the field still remains.

There are two categories of field technicians in a local telecoms centre such as 'reactive field technicians' responsible for overhead wires and 'proactive field technicians' for underground cables. We will focus on the reactive field technicians. Reactive field technicians in local telecoms centres are divided into a number of small "work groups" composed of 4 – 5 field technicians. Each work group is responsible for a small area within the geography the local telecoms centre covers. Two technicians in each group normally perform installations whilst two or three other technicians are involved in fault repairs. The patch of the area for which the group takes responsibility is divided into two or three for fault repairs or installations, depending on the number of the group's technicians. Therefore, each field technician is in charge of a certain sub-patch for fault repairs or installations.

Job allocations and job closures in the field are largely made manually. Every morning each technician has got the print-out of the jobs received during the afternoon of the day before or the night. The print-outs of allocating jobs for the day have job

details such as job location, the tasks involved, the appointments and the phone numbers. Technicians report job closure to, and receive jobs from, the control whenever a fault is cleared. Installation technicians have print-outs for afternoon jobs at lunch time. Field technicians report to the system the kinds and number of jobs they did by inputting the results of their work into the system at the end of the day.

The number of field technicians in a local telecoms centre is determined by considering the average workload of the area covered by the centre. Workload for field technicians is not always even, requiring some flexible deployment of technicians in the same work group. When workload is normal, the field technician could complete it by 6 pm, and have some rest if he does his work satisfactorily. How they work, or in what order they work is directly up to field technicians. Importantly work volume is not determined by line managers or the system but depends on the situation of customers in the field technician's geographical patch. This reactive structure of determining workloads, limits management's capacity to control each employee's performance in terms of work volume and speed. Without the proactive structure of work management that can match the number of people to workloads, the limitations would not be easily overcome. While the communication means in the field developed from handsets through paging to mobile phones, fault clearings and installations have retained strong craft elements. The craft tradition prevalent in field technicians' work lends itself to limited control over their work. Individualised and dispersed work of field technicians adds further difficulties to the control of field technicians' work. Furthermore Field technicians are required to put small stickers on which their name and contact number are printed to a side of customers' phone in order to boost field technicians' accountability for their work to the customers.

'Senior technicians' called 'Siljang' have much experience, skills, the contextual knowledge and long tenure. They take on some elements of an informal supervisory role in the field in terms of work methods, work allocation/adjustment, and skills, and receive some allowances for this role in the field. Despite great potential for these senior technicians to improve the efficiency and effectiveness of work in the field, their ability and skills are under-utilised because they have no chance of being promoted or compensated. Line managers check each technician's work performance (the number, and kind, of jobs) through print-outs everyday but do not monitor it closely. These control systems, which allow field technicians significant self-direction and discretion and ask them to take direct responsibility for their work at the same time, have not changed much since the mid-1980s.

There are two areas of customer services – front-desks function and CSCs. Most work at front-desks and CSCs has been done more or less autonomously by employees. They are supposed to be accountable for their work. However increasing differences are to be found between different clerical functions. CSRs at front-desks deal with customers who visit local telecoms centres. CSCs have been established to deal with customers' enquiries or orders via phone. Front-desk functions are now gradually being transferred to these CSCs.

Nearly every local telecoms centre has its front-desk function in its building. CSRs at front-desks wait for, and deal with, visiting customers. Work volume at the front-desk is directly dependent upon the demands, and the number, of incoming customers in the area that the local telecoms centre covers. This passive structure of front-desks, responding to incoming customers, limits management's capacity to control work

volume. Most work at front-desks is done autonomously following established rules and procedures. In recent years more discretion has been granted CSRs at front-desks in terms of their authority to waive bills within a certain limit. With the devolution of authority, multiplied number of services, diversified customers' demands and added sales activities, CSRs at the front-desk have more discretion in their dealing with customers. The results of daily activities are now reported only to the first line manager, while all results including minor ones had to be reported to the second line managers in the past. There has been no performance control for staff at front-desks in terms of work volume and sales volume except the FOCUS points.

CSCs have the capacity to measure and monitor CSRs' performance in real time through the system called 'Inforex ACD CTS'. They can also check work performance of each CSR by printing out performance statistics during the day: CHT; the number of calls taken; the time spent on taking calls; the number of calls not taken; the time spent on waiting for calls; and the time unavailable (KT Customer Service Centres. May 1999). Despite the sophisticated technical capability of the system, KT management does not use the capacity fully for control purposes. Management usually encourages CSRs to look at their performance themselves and to make an effort to improve if their performance is lower than average. Management encourages CSRs to spend more time than CHT (101 seconds per call) up to 180 seconds per call to explain more to customers, considering that the number of services provided has become diverse and often technical explanations are needed for each service product. CSRs can adjust CTI from automatic function to manual function to slow down the speed of incoming calls and control the number of incoming calls.

Any listening in by managers to CSRs' conversation with customers would be a

very sensitive issue and provoke strong emotions among CSRs. All conversations with customers at CSCs are recorded. These recordings are used for proof when a dispute arises with the customer. These are also used for self-learning and assessment by CSRs. 6 – 7 CSRs who are grouped into a team go into a recording room, listen to what they said to their customers, and discuss how best they can serve customers in terms of voice, words used, expressions, and methods. Thus work at CSCs is still left to CSRs to a significant extent even if management has the systems to monitor their performance more closely.

However, there are some noteworthy developments at CSCs. Line managers at CSCs have started to use various performance statistics to manage work performance as a whole, though the move is cautious. As the size of CSCs increases, the scope of control increases to 40 – 70 CSRs as well. Line managers have begun to use statistics to manage work performance. Otherwise, they would have no ways of knowing how well CSRs are doing. If a CSR's performance is too poor, the line manager calls in her/him, asks her/him why the performance is so low, and requests her to make more effort to improve performance. Moreover, the shift of promotion criteria away from seniority towards performance encourages line managers to devote more concern about work performance. This new trend at CSCs appears to be beginning to bite into the elements of self-direction prevalent under the bureaucratic control system. This is designed to strengthen performance control in a softer form. However, this soft form of control in KT is different from 'soft control' envisaged in BT because the latter is being pursued as an important variant to 'low road' strategies, while the former may be seen as an initial sign of tightening control.

The shop-floor regimes of self-direction under bureaucratic control that had existed in the past have not greatly changed on either the access side or the clerical side. In CSCs management has not fully used technical capability available to strengthen control. Then an important question is raised: why KT has not developed any new control systems to change the existing self-direction. KT management has not been under strong competitive pressures to cut costs and to improve efficiency because of phased deregulation and slow developments in competition, though the pressures imposed by the government have become stronger since the financial crisis. KT management had not developed the overall system for performance management until 1996 but, with the introduction of management contracts, it has just begun to adopt a number of performance measures for senior managers such as budget savings and revenues generated. Newly adopted performance management arrangements fall short of a systematic performance management of individual employees. The current main interests of KT management lie in pursuing organisational changes for strengthening marketing functions, downsizing and culture changes but not in work organisation or control issues. What is also significant is that the organisational structures in the field and front-desks are not appropriate for controlling work performance. Though CSCs were introduced and began to be expanded, much work in the field and front-desks is still based on a reactive structure of work management. Despite management's attempts to monitor and control employees' performance at CSCs, the extent of their success is still partial and patchy, except the project FOCUS. However, the partial developments and the experience of the FOCUS may be a basis on which further efforts to strengthen control can be made.

Weakening Bureaucratic Control

One of the main features of the work systems of public enterprises such as KT was the development of 'bureaucratic control'. It was supported by the hierarchical structure of the organisation and impersonal rules and procedures that were designed to serve public interests rather than to generate maximum profits. However, the evolving commercialism of KT has revealed that the rules and procedures needed to provide public services are not appropriate for more commercial purposes. Many rules proved to be burdensome to responding to customers' demands quickly and flexibly. For example, decision-making processes were so complex and often several steps were needed in order to get final approvals. Even minor facts had to be reported to, and dealt with or approved by, senior management. Now KT management has begun to jettison some of the rules which function as barriers to its commercial activities. The measures comprise the reduction in the number of official documents and forms, the introduction of electronic stamp of approval arrangements, the reduction in the number of decision-making layers, and the devolution of authority downwards (KT. 1997a; KT. 1999a). The criteria whereby management is assessed are now focusing upon not how well the rules and directions from above are followed but how management actually contributes to generating revenues. Consequently management increasingly tends to assess employees by their performance and the extent of their commercial contributions to the organisation. Thus the promotion criteria have already significantly shifted away from seniority towards employees' competence, attendance, and performance. The management contracts between the chief executive of KT and the managing directors of divisions, promotion of young senior managers, the project FOCUS have begun to shake bureaucratic culture rooted in the organisation. Boosted by the relatively

successful implementation of the FOCUS initiative, KT management appears to be preparing more ambitious plans for accelerating new working practices in order to restructure work control systems as well as its basic structure as can be seen in various plans (KT Marketing CS Team. May 1999; KT. Dec.1998; KT Network Division. March 1999).

In this regard the restructuring of bureaucratic control systems is still in the initial phase and has yet to be gone through. Although bureaucratic control systems with self-directed control have gradually been weakened, they are still persistent. Taken together, hybrid forms of control systems, a mixture of emerging 'hard control' system with gradually weakening but persistent bureaucratic control, now govern the workplace. Their relative weight is likely to change over time against bureaucratic control.

7.4.4. Consequences and Implications of Hybrid Control

The punitive nature associated with the FOCUS initiative gives relevant employees and first-line managers negative psychological impacts to quite a significant extent. Most employees and first-line managers interviewed report stress, depression and demoralisation in general. The positive side of hard control is that it has led a relatively successful change in corporate culture away from supplier-centred, public service ethos towards a more commercial, customer-oriented one. Employees, in particular those at customer encounters are getting used to how to provide customers with quality of service and to satisfy them. What KT employees are complaining about is not the necessity to offer customers quality of services, but the way in which KT management has monitored quality of service and enforced it on them. Employees at customer

contact points gradually tend to assimilate values of quality of service and to make efforts to satisfy customers by showing customer-friendly attitudes, by keeping the time appointed, and by delivering services timely. According to a survey by the Korea Gallup Polling Agency (KT Seoul Regional Division. 1998) and KT's own report (1999a), customer satisfaction has improved significantly after the launch of the project of FOCUS. Some young employees and junior managers complain about bureaucratic control because it prevents them from pursuing their proactive activities. However, others, especially with long tenure feel unease about gradually weakening bureaucratic order and increasing commercialism.

Hybrid control systems are not stable, but more contested. They reflect the transitional phase of control systems. The features characterised by old control systems are slowly receding and new features associated with emerging control are surfacing. 'Hard control' over quality of service is linked to the internal and external needs of KT for cultural changes at the current phase of corporate restructuring. Management incentives to tightly control productivity and speed do not seem to be very strong in KT, considering that CSCs do not show much interest in controlling CSRs' productivity. Management control structure at front-desks and in the field is quite passive and therefore is not appropriate to increasing control. The conceptual tools of 'hard control' and 'soft control' are partially effective in explaining KT's hybrid control systems.

7.5. Conclusion

Comparing work control systems in the two companies, we find that there are considerable differences in control systems in their various aspects. BT has transformed

its work control systems from traditional bureaucratic ones to more sophisticated ones which combine 'hard control' with 'soft control', while a hybrid control system has emerged in KT, which mixes an emerging form of 'hard control' with the gradually weakening but still persistent bureaucratic control systems which include strong elements of self-direction. The degree of the density or tightness of control is much higher in BT than that in KT. The nature of work control in BT has been so consistently tight, close and pressing that employees have been given little discretion. Work control in KT has not been so tight in that self-directed elements still remain substantial in the field and front-desks, although less so in CSCs. Although CSCs in KT are equipped with the very similar technologies to CSCs in BT, KT management has not used the technologies for control purposes, whereas BT management has taken full advantage of the technologies available for those purposes.

There are some similarities in the hard nature of control over quality of service in both companies. Both BT and KT have used 'hard control' over quality of service. However, important differences are found between the two cases. Quality control in BT has been exercised to further reduce employees' discretion, whilst that is not the case in KT. Quality control in BT has something to do with work rationalisation, customisation and employees' behaviour. By contrast, quality control in KT is designed to facilitate corporate culture changes away from a public-service, engineering-centred mentality towards a more commercial, customer-oriented ethos by highlighting basic employees' attitude towards customers.

Why then do the two companies show very different work control systems? First of all, different work control systems between the two may be accounted for by divergent sectoral regimes and varying financial regimes between the two countries, both of

which are in turn linked to disparate national systems. The telecoms governance regime in Britain made up of the privatised former monopoly, increasingly intense competition and relatively tight regulation have continuously put significant pressures on BT to minimise costs and to improve the level of service. The demands of the City of London for short-term high profits since privatisation have been a main driving force of constraining BT management to reduce costs for generating high profits. The developed stock market in Britain tends to make BT management be sensitive to share prices, which depend on short-term profitability. The financial systems in Britain, have put BT management under even stronger pressures of cutting costs as well as providing quality of service. These strong pressures to minimise costs, to increase efficiency and to provide customised services have been translated into 'hard control' strategies and later 'soft control' ones by BT management. By comparison, KT is still a public enterprise which lacks strong profit motives. Developments in market competition in Korea have been relatively slow and less intense than those in Britain. As the influences of stock market on KT management have not been significant, the partial privatisation of KT has not given KT management significant incentives to save costs or generate short-term profits. These environments, coupled with low labour cost base of KT, have led KT management to be less concerned with short-term profits and cost minimisation strategies. KT management is rather pressed to strengthen commercial strategies and to change its old public service culture in order to meet diversifying customers' demands and to compete with other operators. Therefore, KT management has not shown much interest in developing performance management of individual employees so far, apart from the FOCUS.

Work control systems also differ between the two because management structure in

KT is rather passive or reactive to customers' demands, while that in BT is more proactive in matching work volume to human resources. Despite the recent efforts of KT management to rationalise and consolidate businesses and local structure, the current management structure in the field and front-desks, inherited from the past, has presented KT management with the stickiness embedded in the locality. The structure, based on local telecoms centres, is not appropriate for management to control work but helps employees retain self-directed work. This differing management structure between the two reflects not just gaps in the extent or phase of corporate restructuring but also different ways of restructuring. Work control systems in KT and BT differ because they are closely associated with diverse ways of structuring their organisations.

Both the degree of deploying new technologies and how to use them affect work control systems, although to a certain extent both of them are also a variable of management strategies. The advanced extent of the deployment of new technologies in BT has helped BT management control work more systematically by automatic work allocation or work scheduling. The limited extent of introducing new technologies has left KT management to partially control work or workers to exercise their self-direction in their work. Depending on the approach of management to new technologies, the similar technology in CSCs such as CTI are used disparately in the two companies.

Lastly, the responses of the unions to work control played a part in explaining differences between the two cases. The NCU or later the CWU has been constrained in how to respond to tighter work control because the political climate and labour legislation until early 1997 was unfavourable to the union and BT management already gained upper hand when large scale redundancies were implemented. A miscalculated industrial action would have been a disaster for the union, as experienced in the 1987

strikes. The alternative left to the union was to accept the need to minimise costs and increase efficiency but to negotiate work control in labour's favour. The union's strategy of negotiated change proved not to be very successful, since BT was able to impose 'hard control' over the years without much resistance from the union. By contrast, the newly elected leadership of KTTU was influenced by the emerging 'militant' independent labour movement in Korea. KTTU posed outright opposition to any significant changes in working practices and often collided with KT management or the government by promoting various collective actions. This has barred KT management from imposing tough control on workers, for example in CSCs. The FOCUS initiative met strong resistance from the union and KT management was forced to loosen its hard nature. These different responses of unions are related to the respective national industrial relations systems.

In the light of these four explanations of significant differences between the two, work control systems proved largely to be bound to national systems and, to a certain extent, to management strategies or the existing management structure.

CHAPTER 8. WORK RATIONALISATION AND MASS CUSTOMISATION

Work rationalisation may often be regarded as leading in the opposite direction to customisation. In other words, the more rationalised work is, then the less customised work is likely to be, whereas the less rationalised work, the more customised work is likely. However, this is not necessarily the case when we look at recent developments concerning work organisation in the telecommunications services industry. Work has often been rationalised or customised alongside corporate restructuring in the two cases being looked at. Work rationalisation and customisation are also very closely related to work control systems as were discussed in the previous chapter.

We will now look at in greater detail how the two telecoms operators have rationalised or customised their service work in the course of accommodating, and responding to, global competition, deregulation and ever-changing technologies. The first section defines rationalisation and customisation. The next two sections examine how work has been rationalised on both the access and clerical side in BT and their respective consequences. They are further followed by two sections which investigate work rationalisation and mass customisation in KT and their outcomes. The last section compares the two cases in terms of rationalisation and customisation and explanations of the differences and similarities are sought.

8.1. What are Rationalisation and Customisation respectively?

8.1.1. The Definition of Work Rationalisation

Work rationalisation is defined as the reorganisation of work processes, procedures

and methods in a number of ways for enhancing efficiency and effectiveness in work allocation, work scheduling and work pace. It may involve the following aspects of work restructuring: the separation of planning from doing; division of value-added activities from supporting ones; removal or rationalisation of support work functions; subdivision of value-added work processes into simple repetitive ones; identification and diffusion of best work practice; standardisation of simplified work activities in terms of unit work time, work processes or procedures across the firm; the adoption of assembly line via virtual conveyor belts; and automation, and computerisation of as much work process as possible. Work rationalisation is a much wider and comprehensive concept than that of valorisation or standardisation.

Demands for services on a large scale in the telecommunications services industry, combined with the need for efficiency in providing services, have led to standardisation and then rationalisation of service provisions. In the 1970s, Levitt (1972, 1976) argued that there would be a need for either a production-line approach to service work or the industrialisation of service. One form of the rationalisation (Taylorisation) of service work has been widely reported in the form of a "McDonaldisation" of service work in various service sectors, particularly in the fast-food sector (Ritzer, 1993; Leider 1996). Taylorisation of operators' job in the telecommunications sector had already taken place during the 1890s - 1920s, firstly in the USA and later in other industrial economies. Taylorised work of human switches (operators) was mechanised in the 1920s by AT&T (Vallas 1993). Although most telecoms monopolies provided standardised services at relatively cheap prices in the name of universal services by the 1970s, work related to service provisions was not generally subject to standardisation or rationalisation, apart from operators' work and later on mechanised switches. Recently, rationalisation or

Taylorisation of service work, or white-collar factories has been widely discussed with reference to call centres (Taylor and Bain 1999b; IDS 1997; The Guardian 02/June/1998). However, a significant proportion of service functions had remained less automated or rationalised and left to the discretion of craft technicians in the field or clerical workers until new computerised equipment was introduced. Computer technologies have opened a new era with their versatility and huge capacity. These new technologies have facilitated rationalisation and customisation in the field and customer service functions in the telecoms industry. However, management has been crucial in rationalisation and customisation because management seeks to utilise economies of scale and scope made available by new technologies in order to enhance efficiency, reduce costs or to customise services.

8.1.2. The Definition of Mass Customisation

In contrast to work rationalisation found in service production both on the access side and on the clerical side, there has been another development in service delivery. 'Mass customisation' may be defined as a new effective way of service delivery designed to meet customers' diversified demands for services on a massive scale in terms of shortened lead time, punctuality, prioritisation and convenience. Mass customisation has generally been discussed with reference to the manufacturing sector (Pine 1993; Feitzinger and Lee 1997). Progress in mass customisation is also argued to have occurred in the service sector (Pine 1993; Hart 1995; Gilmore and Pine 1997; Bowen and Youngdahl 1998). Although Pine (1993, 37) has already identified a trend of mass customisation in the telecoms industry, the theoretical concept of mass customisation has been underdeveloped.

Customers often intervene in service production to a more or lesser degree because services are produced in the interactive processes between customers and service workers (Macdonald and Sirianni 1996, 3; Frenkel 1999). This interaction between customers and services workers in service provisions has important implications for customisation. It is largely limited to front-line workers who contact customers, while back office functions are not usually so interactive. Until the mid-1980s residential customers had to passively choose only few simple, standardised voice services options available to them in the former production systems. There had been limited opportunities to intervene in service production. Gradually, the customisation of service delivery has developed as telecoms operators have pursued their competitive advantages through the provisions of more customised and responsive services. The increasing importance of customer relationships has given birth to a new fashionable management technique, called Customer Relationship Management (CRM) (FT Spring 2000).

Above all, customers' increasingly sophisticated demands for services and products, and customers' pursuit of convenience have underpinned customisation. Competitive advantages lie at telecoms operators' ability to provide customers with diversified services tailored for individually different customers' tastes with high standards of reliability and responsiveness (Berry et al 1994). Priorities in service provisions need to be given to high revenue-generating business customers over others. Heightening customer expectation of services prompts service 'lead time' from service orders or fault reports to service delivery to be shorter. The impossibility to store produced services, in other words, the simultaneity of service production and consumption tends to lead service providers to deliver services at the exactly time when customers want them (Macdonald and Sirianni 1996, 3). Thus the requirement for

instant or just-in-time service delivery is another source of customisation. Customers also demand convenience in service provisions. They want any service they need to be provided by making a call or visit, thus leading service operators to provide 'one-stop services'. The demand for 'one-stop services' has become an important impetus for customisation. These demands have been supported by 'data warehouse' technology (e.g. Computer Service Systems in BT), which enables telecoms operators to provide a proliferating number of products and services for customers and to meet mass customers' various demands (Kelly 1994).

8.2. Work Rationalisation in BT

Management strategy to cut costs has led to the drive to rationalise work as well as to control work. In order to bring down costs, BT management has deployed new technologies and initiated work re-design to bring in more efficient work systems in conjunction with radical organisational restructuring. According to an internal document (BT. 1993b), BT management systematically measured, analysed and standardised various work processed across the company in the early 1990s by using process management techniques. Work processes and procedures in the field and CSCs should be understood, measured, reviewed, and standardised as a basic step to redesign work and to gain control of the processes. These rationalising efforts were aimed at taking advantage of economies of scales made available by new technologies. Time and motion studies were used to rationalise work, and efforts to identify 'best practices' and to attempt to diffuse them across the company have subsequently been made. Taylorisation of work in call centres have been recently well documented with its extensive control and work intensification effects (Fernie and Metcalf. 1998; Taylor and

Bain, 1999b). However, it has not fully been explored how far rationalisation has actually taken place in call centres. Despite some studies on switching technicians in the telecommunications industries (Clark et al. 1988; McLoughlin and Clark. 1994), there have been few studies on field technicians' work in network industries.

Work rationalisation in BT is composed of a number of work restructuring processes. It may involve simplification, new division of labour, routinisation, automation, computerisation, proactive matching work volume with the number of workers, and the adoption of virtual conveyor technologies. We now need to look at how rationalisation has taken place in the field and customer services functions. Then we will discuss the consequences of work rationalisation.

8.2.1. Rationalisation On the Access Side

The technical work that field technicians were doing possessed the strong elements of craft work. Most of the work was performed manually with some help via automated or sophisticated equipment. Traditionally, field technicians' work was featured by the following factors: mobility, geographic dispersion and unpredictability, of the place to work; different travel times from one place to another; various kinds of job; varying degrees of skill requirements and demarcations among technicians; and variant work procedures and methods among field technicians. These factors had prevented the technical work from being properly controlled, automated or easily rationalised, and led field technicians to retain a strong craft nature. In BT management's eyes these were barriers to a more efficient use of the workforce in the field and over time therefore incurred too many costs.

Despite these constraints, installations and fault repairs in the field have been

rationalised in a number of ways: standardisation of work time; standardisation of work processes and procedures; the separation of core activities from support ones; proactive matching of work load with the workforce in a certain geographical patch; and most importantly the adoption of a virtual conveyor technology. These various ways of work rationalisation have been undertaken via cost minimisation as well as efficiency improvements.

Work Standardisation

BT utilised 'motion and time study' through the 'Field Effectiveness and Continuous Improvement Programme' in 1992 in order to standardise work time for installations and fault repairs (BT 1993a). In the programme, field technicians were encouraged to observe how much time their colleagues spent on installations and fault repairs and what sort of problems they encountered. BT management then set a standard time, 'Quality Task Time (QTT)' for each job, within which 80 per cent of observed field technicians were expected to complete their respective jobs. The standardisation of working time for each job simplified job scheduling task of the controls.

Reflecting increased variations in organisational structure and control functions among districts until 1990, work procedures and processes have shown disparities between districts (BT 1990a; NCU. Jan. 1990). Although there were standard work processes or procedures in ISIS Documents, there was little emphasis on requirements to conform to those. Then the standardisations of work procedures and processes started in the field from around 1993 - 4. Management developed a 'production management' approach in order to organise the processes. The methods and procedures of provisions,

maintenance, and fault repairs were rigorously standardised by Field Effectiveness of Quality (FEQ). This provided 'the chapters and verse' on how field technicians would do everything in the form of flow charts and diagrams (BT 1994b 50; 1994c: 66; 1994d: 59). They have also tried to secure a uniform quality of work and consistent work results by introducing the factory concept. They tried to establish and run a 'factory process' with better production management and control, and a responsive system for matching resource and demand by identifying the key production lines in terms of volume and unit costs, setting standard procedures and measures to control the processes effectively (BT 1995b). These procedures were intended to ensure a common approach to field operations. The standard procedures and working practices were defined and management has monitored whether field technicians follow the procedures and practices in a number of ways.[8] They also tried to identify a 'best practice' out of all the diverse practices put together and they have then sought to make everybody in that work area follow this best practice so that the same result could be delivered. However, according to the interviews with managers, such standardisation has not necessarily worked as originally intended because of local customs and practices and other local factors that made the application of standardised processes and procedures inapplicable. The rigidity arising from standardised work procedures and practices may suffocate a small discretion necessary in order to take into account local conditions.

The project 'Framework 2000' was designed to standardise or rationalise work processes in the network to counter these local variations and extend 'best practice' by

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[8] . BT management has used a number of monitoring methods to make sure that all field technicians observe the procedures and working practices. Those methods are quality checks by line managers, monitoring performance data covering quality and effectiveness, later independent quality check by auditors, and focus groups for monitoring fault volume by type and location (BT. 1994b).

building on 'Centres of Excellence' in each of the functional areas (Network BT Feb. 1998). The project sought to identify best practice in one part of the organisation and to get the rest of the organisation to follow this. Though the diffusion of best practice is neither always successful nor uniform, more and more work methods and processes have actually been standardised. BT internal audit reports confirmed that standardised work processes and procedures were followed by field technicians fairly well, despite some minor problems (BT 1997d). These efforts to standardise work processes and procedures have been facilitated to a certain extent by the consolidation of zones and work sites which were responsible for the access network. The standardisation of work laid down the basis for introducing the Work Manager (WM).

Separation of Supporting Functions from Core Ones

According to a BT document, field technicians have only been fully effective for 50 per cent of the time (BT 1992). That is, the other 50 percent of their time had been spent on doing routine administrative work or support activities or solving problems. Support activities such as administrative work, vehicle-related work, and stores were separated from core activities such as installations and repairs. Field Support Offices (later Field Performance Offices) were created to absorb these support activities (BT 1994e; BT 1996a). The offices were required to ensure that all stocks, tools and equipment should be supplied on time so that field technicians can concentrate on their jobs. The offices are supposed to support Field Managers (FMs) by undertaking administrative work, quality checks and data analysis, and keeping stocks, material and vehicles. FMs are supposed to spend 80 per cent of their time in the field to support field technicians. As a result field technicians were encouraged to concentrate on their core activities and

therefore to increase effective time, the actual working time. They have now been exempt from performing administrative task such as filling in work sheets or work logs, or doing support activities. In around 1993 BT already introduced 'Garaging at Home', a practice which involves field technicians taking their cars to their home in the evening and going to work straight from home in the morning. 'Garaging at Home' has increased the effective working time through saving time for field technicians in going to the depot to pick up vans in the morning and to park them back at the depot in the evening.

Matching of Work Volume with Human Resource

In relation to work rationalisation, what is also important were the endeavours of management to proactively match work volume with the number of the workforce, normally called 'resource'. The difficulties for BT management in resourcing the workforce have been the uneven demands for provisions and fault repairs, the shortening lead time for service delivery and tight staffing levels. Demands for installations and fault repairs have also been uneven, depending on weather, season and geographies. Without a proactive effort to match demands and resource, the situation would be that many technicians are idle at some periods or in some localities, or alternatively too few technicians clear faults in winter or in other localities. The following two major ways in which the problems can be tackled were found: the enlargement of the geographical patch for which each control is responsible; and the establishment of 'Resource Management' team. In the past each group of field technicians looked after their relatively small geographical patch, for instance, the town or city, often close to where they lived. There was imbalance in work volume among

localities. To match demands and resource, the geographical areas field technicians have responsibility for were enlarged. In larger geographical areas the number of service orders or faults reported are likely to be less uneven than in smaller patches, which could ease any strains arising from uneven work volume. The establishment of 'Resource Management' teams, separate from line management, was designed to make sure that they deliver 'resource' (the number of workers) in the right numbers, at the right time and in the right location. Previously, line managers used to control their own people. Resource Management teams now have their own national structure in each functional area such as the access network. For the average number of installations or faults reported, they decide how many technicians are needed in that part of the zone or unit at any time on any day. They then decide how many people are needed to do overtime or to go on training courses or annual leave and how many contractors are needed to sort out work backlogs, taking into account tight budgets. When an emergency happens such as flood or gale, Resource Management teams decide how many field technicians in one locality need to be sent to the other affected by the emergency. Thus in the face of uncertain or uneven demands for services, Resource Management teams have been able to maintain a relatively responsive system for matching resource and demands for work within given budgets.

Work Scheduling Technology

In around 1990 BT management introduced a new technique of job allocations and job closures by 'Field Distribution Officers (FDOs)' relying on voice mail functions. This voice mail system allowed FDOs more control of job allocation by giving them ability to place details of each job on the system. Field technicians lost their control of

job scheduling with the introduction of the job scheduling and allocating system via voice mail and FDOs. The new job scheduling system reduced time lost, while waiting on an engaged line to the controls for the next job, and allowed FDOs to serve more than one field technician at the same time.

BT management has developed the job scheduling technique, combining with work rationalisation described above, into the Work Manager (WM), an automatic job allocation and scheduling system, which is aimed primarily at supporting provisions, maintenance and repairs on the access network (BT 1996b). The WM is basically a 'virtual conveyor-belt' based on computer systems. Based on the information provided on CSS, the WM is able to identify the kind of the job, the skill needed to complete the job, the commitment time and priority of the job, and the estimated travel time to go to the job. Using a set of algorithms to match a job detail with the most appropriate technician and taking into account the current location of the technician, the job is allocated to the field technician (BT 1992). Field technicians receive their jobs from, and report completion of them to, the WM on a one job at a time basis via a sophisticated hand-held terminal. Immediately after the field technician reports the completion of his current job, the system looks at his location, identifies the highest priority job nearest to him which matches his skills, and allocates the job to him. The WM is also able to prioritise each job depending on whether the line is a residential line, a business line or a business line in 'Total Care'.

However, the WM did not work very well to start with and got a very bad press internally among field technicians and line managers alike. The initial version of the WM often led field technicians to bypass neighbouring jobs for remote jobs and failing to match jobs with technicians possessing the required skills. It needed a lot of manual

intervention referred to as 'hard-pinning' for changes in job priority or other changes or because field technicians were not fully multi-skilled. The WM has been upgraded into more sophisticated versions which have improved functions. The new WM with 'dynamic scheduling' ability employs an artificial intelligence technique which can generate long-term job assignment schedules up to four days in advance that minimise travel time, maximise contingency and set priorities (BT 1999a). The WM has brought about further work rationalisation via work scheduling technique. The new version of the WM appears to nearly realise Just-In-Time principles in field environment to a certain extent.

8.2.2. Rationalisation On the Clerical Side

Though work organisation in call centres has been much researched with the issues centring around control being hotly debated recently, the rationalisation of work in call centres has not been the subject of detailed investigation. Work on the clerical side, particularly in CSCs has largely been divided into two kinds of job: dealing with customers via the phone; and administrative work which processes orders, faults, billing and engaging in other clerical support. Rationalisation of clerical work in BT involves transforming these two kinds of jobs in order to make them efficient and simple and to help by better matching resources and demands. Work has been rationalised on the clerical side by BT management with the great help of new technologies in order to reduce costs. Staff working in CSCs have been called Customer Service Advisors and staff in NI, OA and Telemarketing have been called operators or Sales Advisors. Here we will refer to them as Customer Service Representatives (CSRs).

Computerisation of Administrative Work

Administrative work in the office, associated with processing service orders, faults, billing and mails, and other clerical support duties, was done manually until the early 1980s. There were customers' files at hand to refer to for information, or to add new information to. Much routine clerical work such as filing customer information and sending reminder mails to customers, was done by Clerical Assistants (CAs). With the introduction of a computer system in the early 1980s clerical functions such as storage of customer information, billing, recording service orders and faults and transferring them to field technicians were computerised and automated. However it was difficult to link the computer system to other systems. The database it established could not be relied on easily and instantly when new services were ordered, and sales or billing enquiries were made.

It was not until CSS (Customer Services System) was introduced in 1989 that the rationalisation of administrative work was further progressed. The CSS, an integrated computer system has a vast customer database whereby it supports BT's customer service operations. It also provides immediate access to customer information about services, orders, repairs and billing details as well as to product information. This enables CSRs to handle large volume of service orders, fault reports and enquiries via the phone. Not only did CSS rationalise administrative work associated with order handling, repairs, customer information and product information, but it also absorbed much of the customer interface work which had been done in many different parts of the organisation. As a result of this rationalisation following the establishment of CSS, much administrative work of clerical functions has greatly been diminished or simplified.

As soon as a customer comes on-line, the customer's phone number, account

number, name and address automatically turn up on the screen by the screen-popping function. Then the system prompts some questions for CSRs to ask the customer, depending on the kind of customer's demand for service. Thus much clerical or administrative work has been simplified and reduced through computerisation and automation. That is why a majority of CAs have disappeared in CSCs and other functions. The number of CAs has decreased from 12,613 in 1985 to 10,228 in 1990 to 2,674 in 1998. The computerisation has relieved COs of administrative tasks, and enabled them to concentrate on dealing with customers on the phone.

Standardisation of Service Work

With regard to handling customers, a number of different aspects or processes would appear to have been standardised on the clerical side: standardisation of scripts; call handling time (CHT); and call waiting time (PCA). First of all, BT has used very simple, rountinised phrases for each customer contact in CSCs, NI, OA or Telemarketing Centres. The phrases are called 'scripts' and appear in printed form on paper or an on-screen template form. The scripts have been used to instruct CSRs on how to treat customers, to sell services and to answer customers' questions so that customers may be satisfied with the services. The phrases include such things as how to make caring responses, how to empathise with customers and other defusing skills when customers complain, how to use the right words and how to avoid using wrong words (BT 1995c). How effectively CSRs use these phrases, is monitored very closely as discussed in the previous chapter.

Another important aspect of the standardisation of CSRs' work has been to set and monitor CHT. which refers to the average time spent on taking a call, and 'Percentage

of Calls Answered in 15 seconds' (PCA). 'CHT' should be short as far as CSRs can provide quality of service for customers. HelpDesks in CSCs which deal with routine calls are allowed to spend 260-80 seconds per call as CHT, while CASs (Customer Account Services) in CSCs, which normally deal with complex work and high volume residential customers, are allowed to spend more time on calls. The extent of work standardisation is different between HelpDesks and CASs within CSCs. CHT is one of the main indices whereby CSRs and their sites are assesses in terms of their performance. Other important standardisation associated with work time is PCA. All calls from customers should be answered within 15 seconds. Though it is one of the important indices adopted for checking quality of service by Oftel, it is likely to drive CSRs to carry on taking calls without a short break. However, CHT and PCA were not enforced until customer service functions were consolidated into separate centres and CTI (Computer Telephone Integration) system was introduced into centres in the early 1990s.

Matching of Work Volume with Human Resources

Another preconditional element of rationalisation if the CTI was to be introduced was to set up separate CSCs. Until the late 1980s each district had its own customer service functions such as answering enquiries, billing, sales, and fault reception separately. Customers who wanted to order new services, to enquire billing, and to report faults had to call a local number and were then put through by an operator to the relevant department. At the end of the 1980s BT began to consolidate customer service functions, which had been scattered in each city or town, into 60 relatively large Customer Reception Centres and 40 Fault Reception Centres. This consolidation of the

functions into separate dedicated centres made it possible to match demands for such services and the number of people working, in a locality or across the country in a more predictable way. BT has been able to utilise CSRs more efficiently by correctly matching demands with human resource. In order to use CSRs or operators more efficiently, separate Resource Management teams were also created. Their job is to calculate and estimate call volume on an hourly, daily, weekly or monthly basis and resource the number of people by combining full-time staff, part-time people, and agency workers. Their main priority has been how to use people more effectively, keeping down labour costs, allowing line managers to concentrate on getting their people to work more and to provide quality of service for customers.

Taylorisation

The most important development in influencing work rationalisation on the clerical side was the introduction of the Automatic Call Distribution system (later CTI - Computer Telephony Integration) into CSCs in 1992. The ACD allowed customers calls to be evenly distributed among CSRs in CSCs first, and then among centres nationally. It is, therefore, possible to optimise the number of people taking calls to the size of demand not just on a region level but also on a national level. Whenever a CSR finishes a call from a customer, the next call is automatically delivered to the CSR without a slack time. Calls keep being fed to the CSR like yet-to-be-assembled parts of vehicles, which keep coming through a conveyor belt in a auto factory. CSRs have to expect or associate endlessly coming calls in their mind as soon as they finish a call. That is why CSRs or operators are to have 'an assembly line' in the head (Taylor and Bain 1999b). We can call it 'a virtual conveyor belt' in the information age. Another

ability of the CTI system to monitor all calls in real time or monitor daily, weekly, monthly performance of each CSR, has significant potential for intensive control as noted in the previous chapter. The ability of the CTI system to switch customer calls from one place to another with little cost has had important implications for the restructuring of the organisation and work in BT. The CTI system has provided the means, of massive relocation of many buildings away from London, of establishing CSCs in green field sites. It has also enabled BT management to link all CSCs together like a virtual national centre and reroute call traffics to CSCs and thereby optimise the number of the workforce to work volume.

Overall, work rationalisation can be simplified as the follow table.

Table 8 -1 **Rationalisation of service work in BT**

	On the access side	On the clerical side
virtual conveyor belt	Work Manager (work scheduling) Hand-held Terminal	Computer Telephone Integration (CTI)
standardisation/ routinsation	QTT (Quality Task Time) for each job, rationalisation of work processes & procedures, identification and diffusion of best practice	CHT (Call Handling Time), PCA (% of calls taken within 15 seconds) scripts for various occasions
computerisation	HHT, local network map, repair history	computerisation of support & administrative work, database on customers
core vs non-core activities increase in effective time	separation of core work from support work garaging at home, giving every support to technicians	concentration on dealing with customers via phone monitoring effective time
matching of resource with work volume	reorganisation of activities on a wider geographical area separate resource management	reorganisation of activities on national basis separate resource management

8.2.3. Consequences of Work Rationalisation

BT has made full use of economies of scale made available by new technologies in

order to rationalise work in the field and CSCs. Work rationalisation has, above all, been inspired by cost considerations. Work rationalisation in BT has had profound consequences for work control, JIT principles, productivity, staffing, organisational structure, skilling, the location of operations and employees' well-being over the years.

First of all, BT was able to make the labour process more transparent through the rationalisation of work. This has given BT management more knowledge of work processes and has enabled BT management to identify where and how they can improve levels of efficiency. BT management has also been able to exercise more control over work, often in 'hard' forms as shown in the previous chapter, by using this knowledge. Therefore, BT management has been able to reduce elements of craft control and self-direction that had significantly remained in the field, and less significantly in clerical work.

The rationalisation of work, together with effort to proactively meet customers' demands with the least possible number of workers, has also led to a kind of 'lean service' provision system: by rationalising or often automating work processes and procedures; by getting rid of non-core activities and concentrating on core businesses; and by removing time buffer and human resource buffer. Job prioritisation, appointments for services or commitment time via the WM has led to a realisation of Just-In-Time (JIT) principles in the access environment, succinctly expressed in the following phrase much quoted within BT, "Getting the job right first time, every time and on time" (NetworkBT Dec. 1998). JIT provision of service is realised and ensured in the clerical environment through a combination of PCA and CTI.

Thirdly, rationalisation, coupled with intensive control, has improved productivity in the field and CSCs. Standardisation of time and work processes in the field before

the introduction of the WM was reported to have increased efficiency by 20 percent (BT 1993b). Indirectly, the reduction in the number of TIIA technicians, who are mostly field technicians, from 48,000 in 1990 to 21,000 in 1998, to a certain extent, reflects the increase in productivity. Other factors contributing to productivity include multi-skilling, the overall upgrade of networks through cable upgrading and digitalisation, and the subsequent reduction in maintenance and repair requirement. Even though the factors above were taken into account, it is true that work rationalisation is one important factor which has contributed to productivity improvement. Work rationalisation in CSCs has played a part of improving productivity reflected in Table 7 – 2. The CTI system is believed to have brought about a big reduction in CHT and an improvement in PCA from 80 percent within 20 seconds to 90 percent within 15 seconds (Espicom Business Communications 1997: 34). The greatly reduced number of CAs from 10,228 in 1990 to 2,674 in 1998 also testifies the extent of improved efficiency via computerisation and work rationalisation.

Fourthly, the implications of work rationalisation for skilling are complex. Field technicians are definitely deskilled in Braverman's sense because work scheduling was taken away from them and given to controls. The elements of craft control have been reduced. Contrary to this deskilling, field technicians are multi-skilled to deal with various tasks such as installations in customers' premises and repairs of overhead cables and underground cables. The actual execution of installations and repairs has not changed much. CSRs are also deskilled because self-directed work in the past was Taylorised and under tight management control. However, they have acquired some computer skills and multi-skills through the integration of billing and sales.

Lastly, employees' responses to work rationalisation have been largely negative.

There have been few perceivable benefits for workers. This is probably because work rationalisation has been driven by cost reduction strategies and accompanied by 'hard control'. Field technicians' hostility towards the WM is expressed in the nicknames of WM or the handheld terminals. They are called the 'Work Mangler' or 'Brick' in a negative, contemptuous sense respectively. Automation of work scheduling via the WM has got rid of the human touch between the controls and the field. The CTI system has put CSRs or operators under real time surveillance discussed earlier. This has caused mounting stress for CSRs. Despite significant improvements in employees' morale and job satisfaction reported in annual CARE Surveys conducted by BT, the union surveys have painted a more gloomy picture of CSCs (CWU 1997; CWU Midlands Regional Committee 1998; CWU Home Counties 1998).

8.3. Mass customisation in BT

BT's customer-focus strategies were, above all, implemented via its frequent reorganisation exercises. The most significant reorganisation, the 'Project Sovereign' in 1991, transformed BT from a geographically-based organisation to a customer-centred one. Before the project all service activities had been carried out at the district level. With the project BT separated businesses for business customers from those for residential customers and field operations from the management of core networks. Different priorities were given to each segment of customers so that BT could provide services for homogeneous groups of customers.

In 1991 a New Customers' Charter that declared that BT would provide quality of service for customers was announced. Customer Service Guarantee Schemes were introduced at the same time (FT 14 Nov.1991; 20 Sep. 1994). Any failure to provide

installation or repair services by promised deadlines would lead to a claim for guaranteed compensation by the customer concerned. Business customers would receive an even higher level of compensation for the potential loss that delayed services might incur to them. The proclaimed customer service guarantee schemes tended to have the strong effect of enforcing field technicians to keep to their commitment time for installations or repairs. At the same time thousands of quality improvement projects were launched and targets were set for each department (FT 27 March 1991). Customer calls were not allowed to get lost or to be shunted endlessly from one department to another.

Customisation reflects the relational aspects of work towards customers, while work rationalisation focuses on work tasks (Frenkel et al. 1999). The guarantee schemes above have allowed customers to control and supervise workers in conjunction with management. This alliance between management and customers under management initiatives is often observed as a mechanism of controlling work and customer relations elsewhere (Leidner 1996, 38; Frenkel et al. 1999, 202). Customisation has been made with regard to prioritisation, shortened lead time, customer convenience and punctuality. Customisation has functioned as an effective management ideology for changing a producer-centred ethos into customer-oriented ones and thereby providing legitimisation for the reform of working practices and more control over work. BT management is able to achieve other objectives than giving customers more satisfaction through customisation. Customisation has often been interwoven with work rationalisation or work control, and become one important aspect of work organisation.

In the processes of customisation new technologies such as the WM in the field and CSS in CSCs have been essential. These technologies have laid the basis on which

customisation can be made. The WM in the field has served customisation through job prioritisation, while CSS in CSCs has served customisation through instant, one-stop services.

8.3.1. Customisation On the Access Side

Service Control via Customers

Mass customisation in the field can be evidenced with reference to shortened lead time, punctuality of service delivery, and the priority given to business customers. In addition to the Customer Service Guarantee Schemes, two different kinds of service control systems have been introduced. Since the early 1990s BT has run feedback systems whereby customers who have just had dealings with BT are surveyed by card or telephone questionnaires (Johnson and Jakeman 1997, 50-2). Survey cards, in which about 10 questions were asked of the customer about the level of satisfaction with service order or fault report process, punctuality, and service delivery, were used for large customers after a repair or an installation. BT's Event Driven Customer Service Measure (EDCSM) surveyed 11,000 customers a year via telephone questionnaires who have had recent transactions with BT. A number of questions are asked of the customer concerning whether the customer is satisfied with quality of service, lead time, punctuality and the degree of employees' courtesy are asked. These feedback control systems are designed to use customers to control and supervise technicians' work in addition to other means of management control. However, the feedback service control systems have not been run strictly but reflected in BT policies towards customers.

Prioritisation and Shortened Lead Time

Customisation in the field involves differentiating between customers, which means that it gives business customers priorities in terms of repair fault services. BT has introduced a number of options for maintenance or repair services which require different charges. Business customers have to pay for more rental charges (£ 80) than residential customers (£ 22.50) do. In return for that, business customers are given a priority above residential customers in fault repair services. 'Standard Care' guarantees fault repair with no additional charge in 5 hours (4 hours from 1999) for business customer and 9 hours for residential customers. Other options such as 'Prompt Care', 'Total Care', or 'Customer Care' are mostly reserved for business customers, and provide a quicker clearance of faults for subscribers than for others when faults occur to the customer (Piemonte 1994: 107). The WM has enabled BT management to prioritise repair jobs and to schedule work of field technicians, depending on priorities as well as efficiency. This prioritisation may, to a certain extent, dampen efficiency, but it also increases business customers' satisfaction.

To compete against new operators, BT management decided to shorten the lead time of services for installations and repairs in around 1991. Until 1991 fault clearance was normally supposed to take two working days. The proportion of fault repairs within two days increased from 74.3% in 1986 to 99.0 - 99.5% in 1991. Since around 1991 field technicians have been required to clear faults for business customers and residential customers within new targets of five hours and nine hours after report. The percentages of faults cleared in the new target time or by successful appointment were expected to be 86% for residential customers and 84% for business customers in 1998 (NetworkBT May 1998). Installations have been expected to take six working days for business customers and eight working days for residential customers. The percentage of

installations to be completed within the target days for business customers and residential customers increased from 28.4% and 18.0% in 1986 to 78.0% and 88% in 1992 respectively. The respective percentages of installations completed within the appointed date increased from 91% and 95% in 1992 to 97.3% and 97.4% in 1998 for business customers and residential customers (Carrel et al.1993: 59; Oftel Feb. 1999).

Punctuality and Convenience

For the punctual delivery of services, BT has operated 'Jeopardy Management' in the field. Jeopardy Management begins to operate, when it becomes clear that the technician who is supposed to take a job, cannot keep to the committed time agreed with the customer for installation or repair for any reason. Then, the 'controls' which are in charge of job scheduling via the WM, become alert and check why the technician cannot take the job, whist identifying another alternative technician available. The job 'in jeopardy' is given priority. So whilst the available technician has to take the job, the job can be quite distant from his current location. Despite the fact that the efficiency of field technicians' work may clearly decline due to 'Jeopardy Management', keeping to the commitment made comes first because customers may judge BT's reliability and expediency of service provision from it.

To deal with service to customers whenever they want, BT has introduced a weekend service and a late hour service for installations and fault repairs. In the past, field technicians used to work 9.00 am-6.00 pm from Monday to Friday. However some customers have wanted BT to provide services at evening or weekends when they stay at home. To meet such requirements, BT has had to introduce weekend and late hour work in the field. These flexible working hours will be discussed in more detail in

the next chapter. Customers are to be provided with services at the time when they want, which includes weekend and late hours.

Customisation through service control by customers, prioritisation, shortened lead times, punctuality and customers' convenience in the field have all had significant impacts on field technicians. Field technicians' jobs have become more demanding and difficult because they are required to complete a job within the time set, to keep the committed time arranged with the customer and to work un-social hours. Combined with the introduction of the WM, the requirements for shortened lead times, prioritisation, punctuality and customer convenience have made field technicians less flexible and autonomous, and more passive in terms of job scheduling, how much time they spend on a job, and how they undertake jobs. Significant cuts in field technicians' jobs since 1992 have made the situation worse with all technicians becoming increasingly busy. Installations and repairs have to be more effectively carried out in order to keep to given commitment time.

8.3.2. Customisation On the Clerical Side

Convenience

Customisation in CSCs has much to do with the convenience with which customers are provided with information or services, which is quite different from that in the field. In the past, information search for customers and products took time and customers had to wait accordingly. The number of services and products has proliferated over the years and customer information has become a huge database. The big step taken to improve and customise services was via the introduction of CSS in around 1989. It has not only

integrated different computer systems and all databases scattered around them into one single system and a database but it has also made the information retained instantly available for various customers' enquiries, service orders, and fault reports. The database system built in CSS is regarded as laying the basis for customisation (Kelly 1994, 20, 81: Pine 1993, 172- 9; Adler 1997: Whitehead 1999). CSS retains all customer information, and products and service information necessary to provide various services for customers in CSCs. When a customer call is taken by a CSR, the screen-popping function of CTI enables customer's detailed information to be displayed on the screen. The CSR can then easily identify the customer's name, address, bills, fault history, services being used by the customer and all other relevant information. CSS has led both sales and billing functions to become integrated and carried out by the same CSRs. CSRs were multi-skilled in billing and sales. With the customisation of service delivery and CSRs' multi-skilling, their jobs have become more demanding but have not been repetitive or boring because they have to deal with customers with a variety of demands. Customers can be provided with the instant services they want in one call. The realisation of 'one stop service' is an important aspect of customisation at CSCs in terms of the convenience, personalisation, and immediacy of services.

Other measures adopted to provide customers with convenience include extending working hours to 12 hours in 17 CSCs and to 24 hours in one CSC in 1997, leading to improvements in PCA. To cover weekend working and late night working BT introduced part-timers and agency staff into CSCs. Customisation through extended working hours will be discussed in the next chapter.

Differentiation

A kind of stratification in CSCs has emerged to address the specific needs of different segments of customers and different kinds of services. CSCs were divided for residential customers and for business customers in 1991. There were a gradual separation between regular CSRs and agency staff dealing with '0800' simple calls in CSCs before 1998. In 1998 '150' and '151' CSCs were reorganised into either 'Customer Account Service' (CAS) or 'Helpdesk'. By differentiating the customer base into groups with similar requirements, for instance, information intensive customers, home movers and teenagers, or pensioners, the reorganisation of CSCs was designed to bring about differentiated customisation among customer segments and to generate maximum revenues to BT (BT Dec. 1997). CAS work is supposed to deal with calls which require detailed solutions to problems or complex needs such as home movers, new service provisions and higher level sales. CAS work is geared up for high billing segments of residential customers. Helpdesk work is perceived to provide basic support for bills, fault reports, and consumer products, to take calls forwarded from Call Steering System and to involve some sales duties. Helpdesk work is designed to cover medium-level billing segment of residential customers. All operator assistant calls, directory enquiries calls and other simple calls and enquiries such as reading billing or faults go to Transaction Services, which is supposed to cover the low billing residential customer segment. Work in CAS involves a bit more discretion for CSRs to deal with complex calls, while work in HelpDesk has become a bit simpler and shorter. Transaction service work has remained very simple, straightforward and repetitive. CAS work has no official CHT, while CHT for HelpDesk has been shortened to 260 seconds. The relative weight of sales in CAS work has become bigger and CSRs in CAS are

required to sell products more actively as well as to deal with customers' various services. The element of sales work in CAS not only involves more stress but also requires more creativity, more social skills and higher-order contextual and theoretical knowledge (Frenkel et al 1999, 91-2). CAS work, HelpDesk work and Transaction services work lie in a continuum between more customisation and standardisation. This differentiation tends to polarise skills between more skilled CSRs in CAS, less skilled CSRs in HelpDesk and unskilled CSRs in Transaction services. Customer calls to '150' CSCs are connected to a 'Call Steering System' in which customers are given 4 options: press 1 for billing; press 2 for faults; press 3 for sales; and press 4 for all others. Through the System, calls are divided into CAS, HelpDesk and Transaction Services.

Customisation through the immediate provision of services on a one-stop basis in CSCs has led CSRs to be multi-skilled so as to deal with every type of calls. Customisation has also brought about extended working hours and improvements in PCA. Customisation via differentiation among customer segments in CSCs has increased differences in work between CAS and Helpdesk. The development of the differentiation between CAS, HelpDesk and Transaction services has led to skill polarisation among CSRs and may become a potential basis for separating grades into two, which will eventually lead to different grades with differing payments, despite the strong opposition of the union (BT 1997e). The increased weight of sales in CAS has caused more stress to CSRs and changed the nature of CSRs' work away from passive service work towards sales work. Another unexpected development in CSCs that customisation has given rise to is the gradual replacement of regular CSRs by agency or

part-time staff. The skill is polarised, especially between full-time CSRs and part-time CSRs or agency workers, depending upon their employment status in BT. This form of skill polarisation has parallels with the wider processes between occupations identified by writers such as Gallie (1991) and de Witte and Stejin (2000) but is of a more 'micro' form, taking place within a single occupation.

As extended hours required for customisation in CSCs were strongly opposed by the union and full-time CSRs, BT has introduced part-timers and agency workers without having to pay for premium rate or at lower rates. Once they were introduced, the extension of working hours has led to a growing proportion of them out of the total workforce.

8.3.3. Consequences of Customisation

Overall, customisation has been made possible through prioritisation, shortened lead time, punctuality, one-stop services, differentiation or enhanced convenience. Shortened lead time, punctual service delivery and other measures enhancing customers' convenience have been contributory to JIT service delivery. Through customisation customers are now able to get what they want from BT at a time suitable to them. BT management has also been able to achieve the reform of working practices and create customer-friendly service delivery arrangements. However, customisation in the field and CSCs tends to make service work more demanding and stressful and often involves significant changes in the nature of work and grading. It has brought few tangible benefits to field technicians and CSRs in terms of autonomy, workload, working hours and job satisfaction. This reflects the fact that customisation is part of a managerial agenda which legitimates management-initiated reforms. However,

employees gain little except multi-skilling in CSCs but find increasing variations or differences among themselves.

The progress in customisation of service provision in BT has been made by BT management's customer-focus strategies. Although there are some occasions where customized service provisions may dampen efficiency, customisation has led to little job-enhancement for workers but has by and large gone along with work rationalisation. That is, customisation has not been achieved through job-enhancement or a 'high road' approach. This means that customer-focus strategies do not necessarily lead to job enhancement outcomes. Service work in the field and CSCs has simultaneously been rationalised and customised. These developments are what we can call 'customised rationalisation', a new phenomenon differing from past service delivery systems in BT. In short, the new picture of work systems, emerging from a simultaneous progress towards work rationalisation and customisation, is that of a 'lean service' system, based on JIT service delivery, virtual assembly lines and tight buffer of human resources and time.

8.4. Work Rationalisation in KT

There has been little tradition of job control or job demarcations in the workplace in Korea because there were few horizontal occupation labour markets during the rapid industrialisation era. The relatively short period of industrialisation in Korea over the 1960s-1980s saw the direct import of modern mass production systems without treading the path of small production systems. Work rationalisation has often meant the upgrading or expansion of industrial production facilities, evoking little resistance from the workforce in so far as it is not accompanied by job cuts.

There have been some attempts from KT management to rationalise work in the field and in customer service functions. The reorganisation of managerial structures within KT has just taken into account work redesign, including work rationalisation and its implications for efficiency. Work rationalisation has not been made by consistent management policies but on an ad hoc basis. In this regard work rationalisation in KT has been reactive rather than proactive to environmental changes. Despite less attention being paid to work reorganisation in KT, there have been a number of developments in computerisation, standardisation, notably in CSCs, fault reception centres, and local telecoms centres. Work rationalisation includes a number of reforms in work processes, procedures and methods. It involves computerisation, a new division of labour, standardisation, rationalisation of various activities of local telecoms centres and the partial adoption of automatic job allocation in the field and in customer service functions. However, persistent elements of self-direction that have remained, as discussed in chapter 7, indicates a limited degree of work rationalisation in KT.

8.4.1. Rationalisation On the Access Side

The work that field technicians perform in KT still retains strong 'craft elements'. Most of work is largely done manually with some help of equipment and some has been automated or computerised. Field technicians' work in KT has, above all, been characterised by work group arrangement. Four to six work groups composed of four to five field technicians are responsible for field operations in a small geographical area of their local telecoms centre. Three to four work groups undertake installations and fault repairs, while one or two groups carry out rearrangements or renewals of overhead cables. Each group in charge of installations and repairs has its own geographical patch

within the area. Two or three technicians normally undertake installations, while two technicians clear faults. The work group has been flexibly organised into installations or repairs, depending on work volume. If too many jobs occur within the patch of the work group, technicians in other groups will join the work group to help fix faults or install lines. These flexible arrangements within the workgroup and among work groups in the local telecoms centre are designed to meet the uneven volume of jobs. Thus the deployment of field technicians may be sub-optimised locally but not beyond that level.

The rapid expansion of the network on a massive scale up until the late 1980s brought disorder and mess to the access network, including underground cables and 'drop wires' from poles to customers' premises. The tasks of realigning or rearranging messy drop wires and cables in the access network an urgent priority as part of work rationalisation. From the mid-1990s KT management paid their attention to upgrading, realignment and rearrangement of cables and drop wires in order to make the local network more stable and less faulty. Mostly due to network upgrading and realignment of cables and drop wires, KT has been able to reduce the staffing level in local telecoms centres. For instance, in a local telecoms centre 32 people used to look after 60,000 lines in 1985, while 32 technicians including temporary workers are responsible for 160,000 lines in 1999.

Installation jobs are allocated to field technicians twice in the morning and at lunch time every day. Repair jobs are allocated in the morning and then whenever faults are reported. As jobs are allocated in the morning and at lunch time, work scheduling and work pace are largely left to technicians, though work pace depends upon the number of jobs occurring in their sub-patches.

Automation

There have been standardised work methods and procedures, for example, how to make joints of cables, how to install 'drop wires' from poles to customers' premises, or how to rearrange messy cables within customers' premises. Every kind of work in the field has its own standardised procedures and methods (KT 1999b). Varying situations in the field require field technicians to apply standardised work methods and procedures more flexibly depending on the situation. There have been few consistent efforts from KT management to systematically standardise work processes and procedures and to strictly apply them to field operations.

KT management has partially automated at least two work areas by introducing new technologies. A new system called TIMS (Telephone Installation Management System) enables KT to install lines without field technicians who go out to the field. The TIMS enables clerical staff to connect the already existing line in the house to the network by choosing the distribution line and an exchange line and linking them within exchange building without asking technicians to go to the field. The TIMS may be very useful in Korea where people frequently move home. The proportion of installations by TIMS is said to account for 40 – 50 percent of the total number of installations, according to the manager in charge of access network management at the headquarters. Another new system called SLMOS (Subscriber Line Maintenance and Operation System) is a centralised computer system for taking fault reports, testing faulty lines, storing data, and analysing fault statistics. Testing of lines and fault receptions, which were separately performed manually and locally in the past, are now integrated and consolidated on a regional basis. As soon as faults are reported, the testing of the faulty lines is undertaken instantly and automatically. Due to SLMOS the former technical

nature of line-testing function has become more clerical work-based and integrated into a whole process including fault receptions. These two systems have automated and rationalised some of field technicians' work and have significantly reduced workload.

Passive Structure of Matching Work Volume with Resources

The number of jobs that field technicians undertake is not set or adjusted by KT management but determined by the number of jobs which occur at their geographical patches or areas. The match of work volume with the number of field technicians may be at most sub-optimised at the level of local telecoms centres. There is no mechanism to proactively match the average number of jobs with the number of technicians at the level of a larger geographical area beyond local telecoms centres or at national level. The number of field technicians in the local telecoms centre is, above all, determined by the number of telephone lines of each local telecoms centre. Uneven demands for installations and fault repairs among local telecoms centres have not been addressed by any proactive effort to match work volume and resource on a larger geographical basis. Thus the possible local sub-optimisation of the number of technicians compared with work volume may be overridden by the unevenness of work volume among local telecoms centres.

This passive system is related to work pace and work scheduling. Apart from the committed time or appointments for installations and repairs, and the number of jobs occurring in their small patches, how fast or in what order technicians would carry out work is up to them. This work system based on local telecoms centres allows field technicians to have significant discretion in work scheduling, work pace and work methods, while it does not give management much scope for control. It has prevented

field technicians' work from being more rationalised.

Most recently KT has begun piloting RIMS (Repair and Installation Management System), whose basic function is to allocate installation and repair jobs to field technicians and to receive reports of job closures. The consequences of the national rollout of RIMS might be far-reaching for field technicians' work. However, the effects of RIMS would be very different from those of Work Manager in BT unless the current passive local structure to match work volume to the number of technicians is not reorganised into proactive one.

Work rationalisation on the access side in KT has been made on the basis of the existing structure, work group arrangements in local telecoms centres. Overall field technicians' work has still retained significant elements of craft control in terms of work scheduling, work methods, job allocation and the pace of work. Rationalisation was concentrated on realigning or rearranging messy local cables and drop wires rather than work processes or procedures. Despite significant developments in automations in installations, fault receptions and line testing, the passive system of matching work volume with resources has remained intact.

8.4.2. Rationalisation On the Clerical Side

Clerical work in KT includes front-desk work and administrative work in local telecoms centres and work in CSCs. Various administrative functions have been rationalised to a significant extent via computerisation. Customer service functions have been gradually rationalised and taylorised. However, work rationalisation on the clerical side has been limited by the extent of corporate restructuring in KT.

Rationalisation and Computerisation of Administrative Work

Many administrative or clerical functions in the office have been rationalised as computer systems were introduced and upgraded in almost all areas. Much clerical support work such as paper work and information processing has been automated with the spread of personal computers. Up until the mid-1990s administrative staff had to produce a great deal of paper work. Much paper work was merely to inform managers of the situation at, or progress in, work but not related to actual revenue-generating activities. A significant reduction in the number of, and the simplification of, reports has been made as rationalising and de-bureaucratising measures were taken. The introduction of an "Electronic Stamp of Approval" arrangements has contributed to the removing of much paper work (KT 1992: 369; KT Feb. 1999: 156-7). Nevertheless, many manually written reports are still being asked of administrative staff in order to report to senior managers.

Computerisation of various functions and information such as billing, customer information, products information, and some management functions has been made (KT 1992: 359-65). In the past, for instance, four copies of the service order were written manually and sent to the relevant departments, when a customer ordered a new line. When CSRs at front-desks or in CSCs take orders and type service orders into the computer system, now service orders are now processed automatically and printed out for field technicians. Despite significant efficiency gains through the computerisation of administrative and support work, each system addressed one or two management functions and were often not compatible with other systems. These various separate systems have not been integrated into one large system, which causes significant

inconvenience and inefficiency in undertaking work. In July 1999 the unsuccessful pilot of ICIS (Integrated Computerised Information System), equivalent to CSS of BT, further delayed the introduction of the integrated system (KTTU 23 July 1999). Administrative and support work in local telecoms centres has been rationalised since 1997 and is being accelerated with the consolidation of local telecoms centres. The remaining bureaucratic ways of doing businesses, the lack of linkages among various systems, the absence of integrated computerised system and the local structure prevent further rationalisation of administrative work.

Taylorisation

Important developments have happened in CSCs, and fault reception centres regarding work rationalisation. Until the mid-1990s the function of customer services provisions via phone was a very small section in each local telecoms centre. The function was to take calls from the small area which the local telecoms centre covered and remained very passive and relaxed. Consolidations of this function and fault reception function into dedicated centres that are equipped with new technologies, has led to work rationalisation. Call centre technologies including ACD or CTI system were brought into the newly established CSCs and fault reception centres.

The CTI system tends to bring with them new forms of work reorganisation into CSCs and fault reception centres: the use of standardised script; the setting of call waiting time and CHT; and the introduction of a virtual conveyor belt technology. Above all, CSRs in CSCs are required to use or at least refer to scripts which are composed of simple, routinised phrases for several common occasions of service. They include how to first greet customers with salutary words, how take to the lead in

conversation, how to interpret customers' intentions and to put them into simple words, and how to confirm service orders the customer has made (KT CSCs 1999). CSRs are also instructed as to how to speak in a clear, cheerful voice in a courteous way at all times. The scripts for CSRs have to be used more flexibly for a great variety of situations relating to customers enquiries, complaints, and service orders.

The CTI in CSCs allocates calls to CSRs in a similar way to the conveyor belt allocating jobs on car assembly lines. This automatic call allocation on a regional basis has taylorised work in customer service functions by controlling work pace, distributing calls evenly among CSRs, and thereby reducing time between calls. These technologies also have built-in functions which measure and produce CHT, the number of calls taken, PCA and other aspects of performance in real time or in statistics form on a daily, weekly and monthly basis. KT Management in CSCs has been concerned about the number of calls taken and PCAs but not CHT, which is a very important measure for work pace control. KT management has not shown much interest in utilising these performance measures for control purposes, despite the availability of information on individual workers' performance by technologies. Work in CSCs has not been so tight , though much work is Taylorised.

Rationalisation

Work rationalisation on the clerical side has been fundamentally influenced by the degree of corporate reorganisation. More than two thirds of customer service functions are still carried out on the face-to-face basis by CSRs at front desks of local telecoms centres. CSRs at front-desks undertake some administrative functions and customer service functions at the same time. Until front-desks are reorganised and integrated into

CSCs fully, work rationalisation in customer service functions will have remained limited. Front-desks or supporting functions in local telecoms centres accounted for more than two thirds of the whole customer service function in 1998 (KT 1999c:16). CSRs working in CSCs numbered 1,780 out of the 5,484 employees undertaking customer service functions in 1998 (KT 1998b: 30,33). Thus the extent of work rationalisation in customer service functions depends on the degree of the restructuring of various functions of local telecoms centres. The local telecoms centres are embedded in the local community so that customers usually visit local telecoms centres for service orders, fault reports, enquiries, and payment of bills rather than call '100' CSCs. Another important reason for the slow rationalisation of front-desks into CSCs is the absence of new technologies such as customer information systems. Because of the inability of CSCs to answer billing enquires, customers have had to visit local telecoms centres. However, customer service functions are being incrementally transferred to CSCs.

Each CSC is organised on a regional basis. The CTI system allocates calls to CSRs on a regional basis but not on a national basis. Thanks to this regional structure, occurrences of uneven or sudden call volumes among regions cannot be evenly distributed or rerouted among CSCs on a national basis. The average call volume which largely depends on the hour of the day or the day of the week, is not optimally matched by the total number of CSRs at the national level. Rationalisation of administrative work in local telecoms centres depends on the extent of the consolidation of local telecoms centres. Administrative work is being rationalised with the consolidation of local telecoms centres into bigger centres.

Work rationalisation on the clerical side has been made through computerisation and Taylorisation with the introduction of new computer systems. The extent of rationalisation in CSCs and fault reception centres is significant, while work at front-desks and administrative work has shown fairly limited rationalisation. The rationalisation of front-desk work and administrative work has been limited by the structure of local telecoms centres and the absence of customer information systems and its progress depends on the degree of corporate restructuring such as the rationalisation of local telecoms centres or the consolidation of customer service functions into CSCs as well as the deployment of a new customer database system.

Table 8 -2 **Work Rationalisation in KT**

	On the access side	On the clerical side
virtual conveyor belt	RIMS is being prepared (not launched)	Computer Telephone Integration (CTI) in CSCs and fault reception centres but not front-desks in local telecoms centres
standardisation/ routinsation	Some standardisation of work processes and procedures	PCA (% of calls taken within 9 seconds), CHT scripts for various occasions
computerisation	TIMs (installations) line testing, fault locations	Administrative or support work automatic order processing
increase in effective time		some emphasis on effective time
proactive matching	flexible match at local level but little matching beyond that level	matching in CSCs at regional level but not at national level

Overall, the extent of work rationalisation both on the access side and on the clerical side has remained limited and uneven among areas. KT management does not appear to have shown systematic efforts to rationalise work in the field and in customer service functions. The attention of KT management has been paid to realignments and rearrangements of cables and wires rather than work rationalisation in the field. Despite

Taylorisation in CSCs, the proportion of CSCs out of the whole customer service function has remained at about a third. The organisational structure is still based on local telecoms centres and KT has not been able to proactively match uneven work volume with the number of workers. In this regard the degree of work rationalisation is closely associated with corporate restructuring. This limited degree of work rationalisation and relatively loose control over performance has not caused great changes to employees' working life. However, KT management has recently initiated changes in local structure and with them rationalisation of work.

8.5. Mass Customisation in KT

KT's basic organisational structure has essentially remained functional on the basis of local telecoms centres, eclectically incorporating some customer-centred functions. The current ongoing consolidation of local telecoms centres is not designed to shift away from the functional, local structure to a customer-centred one. Organisational structures that can clearly address the specific demands of various segments of customers have not been well developed in KT. The functional, local structure has revealed a significant degree of inertia in spite of KT management commitments to shift towards a customer-centred organisation (KT Mar. 1997: 40; KT 1999c: 6).

However, as discussed in chapter 7, the project FOCUS has been relatively successfully in addressing the need for culture changes among front-line employees, thereby bringing about a customer-care climate. In May 1999 KT announced 'Customer Service Charter' in which it promised that it would enhance customer services by delivering services quickly and punctually and compensate for late installations or repairs (KT Seoul News. 10 May 1999). Most of these efforts to heighten

responsiveness to customers' demands are quite a recent phenomenon in KT. The degree of customisation in KT is constrained by slowly upgraded computer systems and gradual organisational changes in comparison to the much fast developments in markets. In the future KT has planned that customers will be divided into four segments according to the levels of their bills and each segment of customers will be dealt with by a separate group of CSRs. Yet how quickly KT will move in this direction remains to be seen.

8.5.1. Customisation On the Access Side

Until the early-1990s service provisions in KT remained producer-centred because demands greatly surpassed supplies. Customers could not raise complaints to technicians. As competition started among telephone operators, the supplier-centred situation has been overturned in favour of customers. However, KT employees including front-line workers have demonstrated some inertia in their producer-centred attitude towards customers. The project FOCUS has altered the supplier-centred ethos into customer-oriented ones among field technicians.

Prioritisation and Shortened Lead Time

KT has developed differentiated repair or maintenance services for separate segments of customers. There has been a separate group of technicians who are responsible for the whole processes of installations and fault repairs of both 'private lines' and 'dedicated data communications lines', both of which are used by business customers or government agencies. This group of technicians is organised as a separate entity and trained as a highly skilled workforce. They are even summoned at night if any important fault occurs at 'private lines' or 'dedicated data communications lines'.

KT also differentiates 'main customers' from ordinary customers in terms of the amount of bills. When faults occur to main customers and ordinary customers at the same time, priorities are given to main customers. However there has been no attempt to differentiate business customers from residential customers. Many small and medium size business customers are treated in an equal way to residential customers. In the past the time set internally for fault repair was two working days in the early 1990s, and until 1997 one day for main customers and residential customers alike. Faults affecting main customers are required to be cleared within 4 hours after they are reported, whereas those of ordinary customers within 12 hours after reports. If a fault affecting a main customer is not cleared within 4 hours after the fault report, a warning sign will turn up on the screen in the control and the control will call and urge the responsible technician to clear the fault of the main customer as quickly as possible. The committed time for repairs within 12 hours for residential customers is being kept at the estimated rate of 70 per cent by field technicians (KT 1999c: 77).

Punctuality and Convenience

In the past field technicians did not make any arrangements for installations with customers. When CSRs take service orders, they make appointments with customers for installation, taking into account the situation of both customers and field technicians. At first, the appointments made were not always kept well by technicians because they were used to working on the basis of a geographical proximity between jobs. According to the two field managers interviewed, management emphasis on keeping the appointed time to customers increased the estimated rate of time-keeping from about 30% to nearly 70-85%. Installations by appointments with customers have tended to

reduce field technicians' discretion in work scheduling and to increase their travelling distances because they have to work according to the order of appointment time for each job rather than the geographical proximity between jobs. Moreover, communications between field technicians and control centres are mostly dependent on the calls to controls from technicians. These do not flexibly meet customers' changing requirements but engender problems of responsiveness. Fault reception centres do not know when the fault affecting a particular customer is cleared and how any repair job is going on, and therefore cannot reply to questions of the customer regarding fault repair. Apart from job allocation in the morning, job allocation in the daytime is passive and takes time. The time taken to allocate faults to field technicians is estimated to average 2.5 hours according to KT management calculations.

The normal working hours of field technicians are fixed to 09:00 am to 17:30 on Mon. – Fri. and 09:00 am to 13:00 on Sat, apart from a group of technicians in charge of private lines and dedicated data communication lines. If any sub-group of technicians do not finish installations or repair jobs allocated within normal working hours, they have to work overtime to keep committed times. For customers' convenience, 3 - 4 technicians stand by in each local telecoms centre just in case at the weekend, while they do repair some faults but not installation work. Instead they are given time-off in lieu on one of the weekdays.

KT management has sought to customise field technicians' work in terms of prioritisation, punctuality, shortened lead time and a customer care attitude. Nevertheless, the degree of customisation in terms of differentiation among different segments of customers, punctual delivery of services, responsiveness to customers

changing requirements, seems to be relatively low due to technologies, organisational structure, and management strategies. Customisation, though its degree is low, has led field technicians' job to become demanding and their discretion to be less in their work scheduling. The project FOCUS has contributed to fostering customer-oriented attitudes among KT employees.

8.5.2. Customisation On the Clerical Side

Customisation requires responsiveness to customers' various enquiries and their diversified demands for a great deal of services. The degree of customisation in KT has been limited by the relatively slow deployment of new technologies such as integrated customer database system. Billing enquiries cannot deal with in CSCs because the billing computer system is not linked to the CTI.

Working hours in CSCs were extended to night time and weekends. Customer services at night or weekends are dealt with in three CSCs nationally and faults are received at each fault reception centre. 24 hour services in CSCs and fault reception centres are aimed to meet customers demand for convenience. Improvements in PCA in CSCs are also one of the means of increasing responsiveness to customers' calls. FOCUS has strongly influenced the general climate of customisation at CSCs, front-desks and fault reception centres.

For customers' convenience, CSCs are required to provide one-stop services for all customers' demands. CSRs at front-desks in local call centres can provide for visiting customers any service they want by using various sources of information in different systems. CSCs take orders and answer general enquiries into products and other but cannot deal with billing enquiries. As billing enquiries are only dealt with by CSRs at

front-desks of local telecoms centres, customers have to go to local telecoms centres when they have queries or problems with billing. CSCs have only basic information on customers such as their name, address and telephone number, but they do not have information on customers' billing and services being used on the screen. In the circumstances CSRs are less likely to provide customised services for customers when they take calls. Although KT has just begun to encourage CSRs to sell services especially to business customers, they do not have information necessary to judge whether or not there are any opportunities to sell services to customers. The practical absence of sale and functions in CSCs tends to make CSRs' jobs in CSCs less complex and less demanding. The inability of CSCs to provide one-stop services for customers is largely due to the absence of new technologies geared to customisation in CSCs. For example, the pilot to deploy an integrated customer database called ICIS (Integrated Customer Information System), which would allow CSCs to provide one-stop services for customers, failed in July 1999. Because of the absence of an automatic screen-popping function of the CTI CSRs in CSCs are not able to provide services quickly. It takes time for CSRs to have access to customers' basic information on the screen.

The low publicity of '100' CSCs and '110' fault reception centres as well as the low degree of consolidation of CSCs stands in the way of customisation in KT. As many customers still do not know that there are dedicated CSCs which deal with various enquiries and service orders, they often call other numbers in order to ask queries or order services and are then informed of the number of CSCs or fault reception centres (KT 1999c: 76). Too many phone numbers (around 70) for reporting faults of different services make customers confusing about where they have to report faults. Other customers still think that they have to go to local telecoms centres when

they want to order services or to make enquiries.

CSCs or fault reception centres show some signs of customisation in terms of the extension of working hours, improvement in PCA and CSRs' attitude towards customers. However, customisation has not developed far enough to meet customers' various demands for one-stop services, immediacy and differentiation among different customer segments. The low level of customisation in CSCs largely reflects the underdevelopment in applied computer systems. It also mirrors management strategies which have shown less interest in customers' demands for convenience and sophisticated services, and in their associated organisational reforms. The limited extent of customisation in CSCs is filled by more customised services at the front-desks of local telecoms centres. Front-desks are gradually being transferred to CSCs and an integrated customer database system, ICIS, which will change work at CSCs, is being piloted.

Overall, customisation on the access side and on the clerical side in KT is in an early phase in the sense that KT management has focused on changes in employees' attitude or corporate culture towards customers. Although some customisation has been made in terms of prioritisation, shortened lead time, punctuality, convenience and differentiation, the extent of customisation has remained fairly limited because of limited corporate restructuring due to embedded local structures, the absence of relevant technologies and KT management who has not developed any consistent policies towards customisation. Customisation or customer-orientation as an ideology has usefully been deployed to promote culture changes by KT management.

8.6. Conclusion

Work rationalisation and customisation are important ways of reforming working organisation so as to be suited to new competitive conditions. Work rationalisation is inspired by cost considerations, whereas customisation is driven by the emphasis on customer demands. The service delivery system in BT has been greatly rationalised and customised into what we can call, a 'lean service' service system, whereas KT has shown limited rationalisation and the early phase of customisation. The reforms in service delivery systems proved to be closely linked to corporate restructuring in that the degree of work rationalisation and customisation in KT has been by limited corporate restructuring due to the embedded nature of local telecoms centres in the local community.

These considerable differences do not simply reflect different phases of corporate restructuring between BT and KT but are also due to other important factors. For example, the different timing in the deployment of new technologies essential for rationalisation and customisation may partly explain the different phases of restructuring between the two companies. However, the differences in rationalisation and customisation between the two may have arisen from varying national arrangements, the existing structure or management policies.

While BT management has stressed the need for work rationalisation and customisation in order to bring down costs and to provide quality of services, KT management has focused more upon realignment or renewal of local cable and drop wires and culture changes than rationalisation and other forms of customisation. The differences between the two are closely associated with management structure, which inherits previous structures or decisions made in the past. For instance, the local

structure in KT has been a big barrier to work rationalisation. Similar call centre technologies have been used very differently for the purposes of rationalisation and control between the two, depending on management strategies. The two unions' (NCU/CWU and KTTU) responses to corporate restructuring as a whole may partly explain the limited extent of rationalisation in KT. These differences in management policies or strategies, organisational structure, and the phases of corporate restructuring have in turn been influenced by discrepancies in telecoms governance regimes, the trajectories of the companies and eventually national contexts between the two.

There are also certain differences, especially in work rationalisation between the access side and the clerical side. Work in CSCs has been subject to a high degree of rationalisation or Taylorisation, whereas work in the field has been less subject to rationalisation despite the deployment of Work Manager in BT. Jobs in the field normally have a long time cycle. Field technicians in BT are supposed to usually carry out two or three jobs in the morning and two or three jobs in the afternoon, although they could undertake more simple jobs. CSRs take 10 – 13 calls per hour and can be more closely monitored by the CTI, whilst it is difficult for BT management to closely supervise field technicians working geographically dispersed, whereas CSRs are working in an open space where managers can physically watch CSRs. These differences are linked to the nature of work and work environment.

Customisation does not counter or contradict rationalisation but often goes hand in hand with it, especially within BT. What BT has sought through rationalisation and customisation seems to be a 'lean service' service system. KT has undergone the limited extent of rationalisation and customisation and still retains substantial elements of the legacies inherited from the past.

CHAPTER 9. THE FLEXIBLE USE OF THE WORKFORCE

9.1. Introduction

The third aspect of work organisation is flexibility in labour deployment. Deregulation of the labour market or market regulation of labour management has been sought in the name of flexibility. Flexibility has been part of an agenda whereby management has sought to promote reform to existing working practices. Flexibility, in the face of increasing competition and pressures to reduce costs and improve quality, has been a catch phrase for work and employment reforms in Britain since the early 1980s. In Korea flexibility has been a major means whereby management has sought the reform of so-called ' rigidities of the labour market since the mid-1990s. Despite management's apparent emphasis on flexibility, it seems that flexibility has been interpreted differently and different dimensions of flexibility are highlighted, depending on the context. Different management strategies are likely to seek to emphasise their related dimension of flexibility, while other dimensions of flexibility may be regarded as being unimportant.

The discourse of flexibility is also heavily value-laden in the sense that flexibility is a good thing *vis-à-vis* rigidities or 'restrictive practices' (Hyman 1991: 281; Hyman and Elger: 1981). Flexibility is quite a slippery concept that is often vaguely defined and confusing, and each dimension of flexibility often stands in contradiction to one another (Hyman 1991: 280; Dastmalchian and Blyton 1998). It includes qualitatively heterogeneous dimensions of working or employment practices, which cannot be adequately fitted into a coherent whole. The implications of these different dimensions

have become clearer when we think of the opposite of each dimension of flexibility: task flexibility versus job control or job demarcations; numerical flexibility versus employment security; time flexibility versus normal working hours; and spatial flexibility versus stable working place or work basis. To avoid ambiguity and confusion around the slippery concept of flexibility, we need to differentiate between very qualitatively different dimensions of flexibility and to look at those separately.

One of the much discussed thesis which revolves around the flexibility debate is Atkinson's 'flexible firm' model (Atkinson 1984; Atkinson and Meager 1986). This model is relevant to changes to work and employment relations, which may take place in the process of corporate restructuring. This model identifies three main types of labour flexibility: functional flexibility of the core workforce; numerical flexibility related to the peripheral workforce; and financial flexibility. It is too simplified and often prescriptive to capture the complex and contradictory nature of flexibility that will be detailed later.

There are largely three ways in which management can pursue the flexible use of the workforce. Internal flexibility, for example, task flexibility means that firms are seeking to more flexibly and productively utilise the existing workforce. External flexibility (numerical flexibility) refers to the use of outside workforce not directly employed by firms or part-timers. The third flexibility (e.g. spatial flexibility) is a form of flexibility which combines internal and external flexibility. There are two different kinds of internal flexibility: task flexibility involving multi-skilling and multi-tasking; and time flexibility covering longer and flexible working hours. Despite the managerial connotation of flexibility and its contradictory confusion, the four dimensions of flexibility may illuminate developments in qualitatively different aspects of work

organisation. Various changes in these four dimensions of flexibility will become clear when we compare task flexibility with job demarcations, numerical flexibility with employment security, time flexibility with normal working hours and spatial flexibility with stable workplace. Those changes revealed by the comparison of each aspect of flexibility with its opposite will enrich the substantive content of work reorganisation

9.2. The Flexible Use of the Workforce in BT

9.2.1. Task flexibility

Task Flexibility On the Access Side

Before we discuss how BT intended to reform work organisation in order to enhance task flexibility, there is a need to look at the legacy of job demarcations and grades among field technicians on BT. There were clear job demarcations among field technicians of different specialisms, called 'Fitters', 'Installers', 'Faultman Jointers' and 'Customer Apparatus and Linemen' until 1987. There were job descriptions in which BT specified what technicians of each specialism were supposed to do. For example, 'Fitters' were supposed to install telephone lines or telecoms equipment inside customers' premises. 'Faultman Jointers' jobs were to repair faults in overhead wire and underground cables outside customers' premises. Thus two separate field technicians, an 'Installers' and a 'Fitter' were needed to complete an installation job. There were also a number of grades for field technicians at the time. Technician IIBs (TIIBs) were semi-skilled technicians. Technician IIAs (TIIAs) have been fully-skilled field technicians. Technician Is (TIs) were in charge of training TIIBs and giving technical support to a group of TIIAs in the field. Senior Technicians (STs) were supposed to have the highest skills, to support field managers and to allocate tasks to,

and to supervise, other technicians (BT. May 1988). Career ladders for field technicians were TIIBs – TIIAs – TIs – STs. The largest grade has been TIIAs. Within this grade a hierarchy and an informal sub-structure of the hierarchy developed, depending on the complexity or cleanliness of work and the possibility of interaction. Among field technicians, especially TIIAs, work in customer premises had the highest status, overhead and underground fault repair work had middle status, while work for pole erection and the installation of main cables is more manual and labour work and regarded as the lowest status (Penn. 1990, 139). Each family of field technicians formed their respective sub-work communities within larger work communities of field technicians. However, these rigid job boundaries between field technicians were regarded by BT management as restricting flexibility to meet peaks and troughs of demand, and incurring double handling (BT. Nov. 1990).

The first major reform to enhance task flexibility in BT came via the 'Job Re-patterning Agreement' which was concluded in Feb 1987 after 17 days' strike by technicians. BT's intension was to remove traditional job demarcations between different groups of field technicians with their respective specialisms and to redefine job descriptions in broad terms of knowledge and tasks in order for field technicians to carry out various job tasks at the same time. These reforms in job demarcations took the form of multi-skilling. Two groups of technicians who were called 'Installers' and 'Fitters' respectively were integrated into 'One Man Installers' to deal with installation jobs at the same time. One Man Installers were required to do jobs of 'Customer Apparatus and Linemen' who had been responsible for fault repairs at customer premises and overhead wire. Customer Apparatus and Linemen were supposed to undertake fault repair jobs in underground cables which had been done by Faultman

Jointers until 1987. This multi-skilling required field technicians to acquire skills other than their own specialisms.

However, this first attempt to pursue task flexibility by multi-skilling field technicians proved not altogether successful. According to field technicians interviewed, the informal sub-structure of the hierarchy among different specialisms of technicians tended to make technicians having working at customer premises reluctant to undertake underground work, while technicians having undertaken underground work were not reluctant to work at customer premises. According to a senior national union officer responsible for field technicians, the Repatterning Agreement of 1987 was not appropriately implemented by local managers because many local managers thought such multi-skilling would not help improve productivity and quality.

BT did not stop multi-skilling field technicians. In 1992 BT again established Personal Communications division's (PCD) national framework for the application of the terms of the 1987 Repatterning Agreement in order to gain flexibility by avoiding the double handing of work tasks (BT. 1992a). BT management continued to multi-skill all field technicians by the end of 1995 (BT. Sep. 1995). Thanks to these continuous efforts, a significant number of field technicians have been multi-skilled particularly in rural areas. Yet in large cities, especially in London job specialisms among field technicians remained strong. The major reason for the persistence of technicians' skill specialisms in big cities lay in the fact that there were many jobs demanding those specific skills. Many field managers in big cities even thought such skill specialisms could be more productive. Another important factor which prevented field technicians from being multi-skilled, was the significant costs (£4,400 – 9,000) involved in training technicians ("News Service." June 1998).

Thus 51 percent of field technicians were revealed to be triple-skilled (installation, fault repair at customer premises, and fault repair of overhead and underground cables), 21 percent were dual-skilled and 28 percent remained single-skilled in 1995. In one of the three zones which were responsible for the access network, the targets of multi-skilling were to have 60 percent of reactive field technicians triple-skilled as full Customer Service Engineers, 95 percent dual-skilled as Customer Apparatus and Linemen and One Man Installers by spring 1999 ("News Service.". June 1998). According to field technicians and union officers interviewed, they suspect that the proportion of multi-skilled field technicians may be lower than the official statistics of BT suggest.

More recently more momentum behind the skilling of field technicians has built up, given the need to provide high speed internet services. More than 4,000 technicians have been trained up to provide ISDN II on stand by for the 'BT Highway' – a high speed internet service for residential and business users ("News Service." Sep. 1998, Oct. 1998). The launch of ADSL (Asymmetrical Digital Subscriber Line) for high-speed internet services needs field technicians to have more sophisticated skills to install and repair ADSL lines. According to a document published by the union, over the next 5 years, requirements for both operational and support skills will reduce by some 31 – 37 percent, while requirements for systems integration skills increase by 29 percent over the same period (CWU. May 1997).

Task Flexibility On the Clerical Side

There used to be a separate sales office (for new service orders) and account office (for billing functions) in each district until 1990. The sales office only dealt with the

provision of services by taking service orders, while the account office performed billing functions. As Call Reception Units (the former organisation of CSCs) were established by integrating billing and sales functions scattered by district in the early 1990s, CSRs in the two offices were trained in each other's skills so that CSRs could have dual billing and sales skills. Other functions would be transferred to a support function. Now '150' CSCs are supposed to represent one contact point where CSRs deal with every service that customers want. At the end of 1993, 'Customer Service Selling Initiative' was introduced with the agreement with the union. At the time it started as an entirely voluntary scheme because CSRs had not been trained to sell anything. After BT trained CSRs about how to sell service products proactively, CSRs were required to sell but did not have selling targets. Proactive selling gradually became intense in 1994 – 1995. The emphasis on proactive selling was technically supported by the screen-popping function of the CTI, which means that customers' information about their bills and services automatically turn up on the screen when CSRs take customers' call. This screen-popping function of the system enables CSRs to identify whether there is any opportunity to sell service products and how much to sell to the customers. CSRs are now dealing with new service orders, billing and proactive selling. They required significant knowledge of the proliferating number of service products and ever-changing prices to answer enquiries and to sell those products. They acquire navigating skills between different systems in CSS and social skills required to deal with various enquiries and to sell service products. CSRs have been triple-skilled in comparison to the late 1980s. Proactive selling can be another important skill but is also a main source of stress and pressure because it is being managed and incentives are provided according to the amount of selling.

With the deployment of computer technology, the boundaries between technical grades and clerical grades which had been clear have tended to be blurred in BT. An increasing number of office-based clerical workers who work with technical staff have learned computing skills or working on the systems. According to the union clerical branch officers in N & S (Network and Systems), clerical people are increasingly beginning to do, or have been doing, what would have been traditionally technical work. It is now possible to train clerical people to perform some quite complex tasks that involve systems on the network. There are areas where technicians called Diagnostic Testing Officers were converted into CO grade in '151' CSCs and '154' CSCs. With the onset of a new testing technology some clerical workers in '151' CSCs or '154' CSCs are testing the lines reported to be faulty from customers because the workers no longer need to have the technical expertise to test lines or to diagnose particular faults. Some work that had been done by technical grades has slowly migrated to clerical grades. A lot of training has taken place in order for clerical grades to take the work. In this regard CSRs or clerical workers may be regarded as being upskilled.

However, the impression of CSRs or clerical grades' upskilling is easily reversed, taking into account the fact that how management controls work and to what extent management rationalise, Taylorise work in CSCs and other clerical work. As already shown in Chapter 7 and 8, work in CSCs has been Taylorised with the introduction of call centre technologies. It has been under the surveillance of management by various statistics, visualised real time monitoring and short work cycles. Clerical work has also been rationalised and computerised. These deskilling tendencies have been very strong. In brief, CSRs are multi-skilled with functions of billing, service orders and proactive

selling. Some of the clerical work appears to be upskilled by taking over a certain technical work which was formerly done by technical grades with the help of computer technology. These positive aspects of multi-skilling and upskilling are overshadowed by strong deskilling initiatives of rationalization and Taylorisation.

Overall, task flexibility in the field and CSCs has been sought by BT management in order to provide speedy and convenient services on a one-stop basis, remove duplicated visits and calls, increase efficiency and thereby reduce costs. Task flexibility, particularly in the field was achieved by getting rid of job demarcations among different specialisms of field technicians. This task flexibility has contributed to upskilling and reduction in worker monotony, especially in CSCs. However, a more complex picture in which conflicting tendencies of both multi-skilling and deskilling have occurred, has emerged. While task flexibility/multi-skilling has increased both in the field and in CSCs, deskilling has simultaneously taken place in the processes of management-driven work rationalisation and tightening work control, work scheduling by the WM and CTI. The existing literature which focus either on optimistic (upgrading) or pessimistic (downgrading) perspective cannot explain these contradictory tendencies found in changes in the contemporary workplace. We need to carefully look at automating and innovating role of new technologies (Zuboff 1988). There has also been a trend of skill polarisation especially, among CSRs, which will be discussed in the next section. Thus, we can find the complex picture of the simultaneous occurrence of upgrading, downgrading and skill polarisation in the workplace in BT.

9.2.2. External Flexibility

Another important aspect in the flexible use of the workforce is what we call 'external flexibility. It is also termed as 'numerical flexibility in the 'flexible firm' model. BT management has been under strong pressure to reduce the number of permanent workers in order to cut labour costs and to increase efficiency in terms of the number of exchange lines per employees, even though they have had to use a significant number of temporary workers instead. BT has not only outsourced so-called non-core activities such as cleaning, catering, security, building services and building facilities management but has also brought in many contractors or agency workers and part-timers in 'core' activities such as work in the network and work in CSCs. BT had argued for the use of temporary workers (short-term/fixed-term contracts and contractors or agency workers) to cover short-term peak demands which would eventually decline. BT's justification of the use of temporary workers has changed from resourcing short-term demands in the late 1980s to containing costs in the 1990s. Moreover the increase in the number of temporary workers, particularly agency staff took place whereas BT cut a great deal of permanent people by redundancies. BT has now reached even the point of talking about the need to balance 'direct' and 'indirect labour' in its resourcing plan. The changing levels of BT's indirect employment are shown as in the table below. The seriousness of the use of agency workers in CSCs and contractors in the field or at CSCs was evidenced by London technicians' strike of 1997 and the strike of CSRs in Nov. 1999, both of which centred, *inter alia*, on the excessive use of contractors or agency workers.

Table 9 -1 **BT's Indirect Employment**

	1991	1995	1996	1997	1998
Outsourced jobs	0	6,330	5,915	6,720	5,961
Agency staff	3,250	7,647	7,235	7,583	17,600

Contractors (field technicians	6,760	7,900	7,373	7,422	9,000

Source: CWU Feb. 1999 Roger Darlington; BT 1999. Group Personnel Manager

The Increasing use of Contractors and Agency workers

On the Access side: BT has used contractors and short-term/fixed-term contracts in the field. Subcontracting has traditionally been used in civil engineering work for cabling and jointing work on the access network (MacKenzie 1998, 156–61). In the latter half of 1980s BT faced the task of upgrading the external network, requiring a short-term demand for technicians for about 2 years. This would be followed by a sharp decline in the number of technicians according to the Manpower Projections (NCU. 9 April 1987 LTB; IRRA. 1987 No. 402). Moreover, BT was keen on using external contractors in resourcing these short-term demands. Taking into account the Manpower Projections and the risk of BT's more widespread use of external contractors without any agreement, the union (NCU) concluded agreements with BT management, which allowed BT to introduce short-term contracts and external contractors in 1987 - 8 (NCU. 8th Nov. 1988 LTB; NCU/BT. 21st Feb. 1989).

BT has shifted the legitimisation of the use of contractors from short-term cover in the late 1980s to cost control in the 1990s (BT 22nd May 1992). In 1993, BT secured the union's reluctant agreement to allow the continued use of contractors in activities where the long term requirement was already established, while it committed itself to information provisions, consultations and review of the arrangements with the union. Many field technicians (TIIAs) left BT by taking redundancies from 1992 onwards with the number of TIIAs reducing from 48,091 in 1990 to 21,236 in 1998. BT instead brought in many contractors in the field. The union strongly resisted the increasing use of contractors because they tended to replace the existing permanent technicians' jobs.

Despite the transfer of more than 600 contractors into permanent employees following the union's constant pressure, BT had to rely on a significant number of contractors and excessive overtime in 1997 because of the lack of field technicians. BT's decision to bring in more contractors in London, together with understaffing and macho management style, instigated 2,400 London field technicians' to go on a one day strike in August 1997 (BT. Aug. 1997; "Crosstalk." Oct. 1997). As a result, BT had to recruit more 389 technicians, to remove contractors from the field in London and to improve management's arbitrary performance targets and aggressive style. Similar technicians' dispute on the use of contractors happened in North West of England in autumn 1997.

However, BT has begun to realise the problems with the under-resourcing and the widespread use of contractors and short-term contracts by replacing permanent field technicians, especially in the late 1990s when demands for telecoms services, particularly internet services were significantly growing. The number of TIIAs (field technicians) in BT Network and Systems Division increased from 17,286 at the end of March 1998 to 19,316 at the end of August 1998. Despite increased recruitment, many customers in some areas have had to wait up to 2 weeks for fault repairs because of the lack of field technicians (FT. 05 Nov. 1999). Although the union's opposition has blocked BT from using contractors on the access side, both the massive redundancies of field technicians in the 1990s and newly growing demands for field technicians tend to increase the use of contractors in laying large underground cables and laying cables in new building sites.

On The Clerical Sides: The situation at CSCs is more complex than that in the field because many agency staff have been used together with full-time CSRs at the same

time. What underpins the growing use of agency workers is cost considerations and less importantly, the nature of work and attendance patterns. Agency staff were working on contracts with a pay differential of between 80% and 120% with BT permanent workers who were carrying out exactly the same work (CWU Dec. 1995. Voice). COs (Clerical Officers), the grade of CSRs who take call in CSCs decreased from 16,915 in 1990 to 12,564 in 1995 to 10,747 in 1998 through successive redundancies, while the number of calls which COs had to take greatly increased during the same period. BT had to introduce more and more agency or part-time staff to replace the permanent CSRs and to cover the increase in call volume, even though BT has increased the productivity in CSCs.

BT had increasingly used agency staff in CSCs despite the union's opposition in about 1993 onwards. The introduction of agency workers in CSCs was at first justified to cover peak-time work or short-term cover such as maternity or sick leaves of permanent CSRs, or marketing campaigns on a short-term basis. However, more agency staff were then used in '0800' in order to deal with simple billing enquiries (0800) and to promote other discount products in CSCs. Agency workers were used to cover night time work or weekend work. The position of BT management was made clear by PCD Personnel Director as follows (BT PCD. 27th Sep. 1996).

> "...the use of agency staff was and would continue to be a fundamental part of the Division's resourcing plan because of the need for a high degree of flexibility as PC moved into new area of activity."

While BT froze recruitment of permanent full-time CSRs or sometimes even part-time CSRs, more and more agency workers continued to be taken on in '150' and '151' CSCs. The number of agency workers used in '150' and '151' CSCs has rapidly

increased from 575 in March 1996 to 2,727 in October 1998 ("CWU Voice." Feb. 1999). The union tried to stop and control the situation either by the threat of national one-day strike in 1996 or by the agreements which contained commitment to reduce the number of agency workers in CSCs ('London Link'. 1996. No.26; 'CSC Newsletter'. 1996. No. 2).

Table 9 -2 **Staffing in 150, 151 CSCs sites in 1998**

	'150' CSCs	'151' CSCs	Subtotal
full-time	1,892	423	2,316
new full-time	298		298
part-time	2,380	684	3,064
agency	1,945	728	2,673
total	6,515	1,635	8,350

Source: BT. Oct. 1998. Statistics.

In NI (Number Information) and OA (Operator Assistance), agency staff have been brought in since 1991. Some 5,500 out of the total 8,700 operators in NI and OA were agency staff in 1997, many of whom were former BT operators (IDS. Oct. 1997.). Few agency operators have been offered BT full-time jobs. Agency staff have accounted for 70 – 80 percent of the total 8,000 staff at BT's six telemarketing centres in which workers make outbound calls to sell service products. The proportion of agency staff at BT call centres as a whole including CSCs, NI, OA and telemarketing centres is over 50 percent of the total staff. This ratio of agency staff out of the total staff in BT call centres is a much higher than average ratio at other call centres in the UK where an average 71 percent of employees are on full-time permanent contracts in 1999 (IDS. June 1999; IDS. Feb. 1998; CWU. May 1999).

The deployment of too many agency workers at CSCs, NI, OA, Telemarketing centres has had quite a negative impact on job security and terms and conditions of the existing CSRs. Agency workers are denied any appeal through internal grievance

procedures and are usually taken off contracts for minor or trivial reasons (CWU Voice, July 1998). The annual turnover rate of agency workers of over 100% in CSCs and telemarketing centres can be seen as a passive expression of their exhaustion and complaints (CWU. 1998). Although many managers are frustrated at the increasing use of agency staff, BT management is sensitive to the views of the City that want to see continuing reduction in BT staff numbers. The use of too many agency staff was met with a one-day strike by CSRs in November 1999. BT has to increase permanent full-time staff and reduce the proportion of agency staffing to 13% of the workforce in '150' CSCs, along with other significant improvements (CWU. Dec. 1999).

Part-time workers

Another form of flexibility in employment is the use of part-time workers. The increasing use of part-timers especially in CSCs is aimed at controlling costs and covering evening time and Saturday in order to render services available for longer time. There were some 'fixed hours' part-time contracts for 18-30 hours a week before 1991. In April 1991 an agreement that extended normal opening hours in CSCs to Saturday was reached between BT and the union. Saturday work was to be covered by the use of part-time staff (BT/NCU April 1991). Full-time CSRs who volunteered for Saturday over and above their normal hours would get overtime rates. Part-time staff in CSCs, at first, were used in order to maintain flexibility for full-time staff, to meet peak-time traffic and to cover attendance at the beginning and end of each working day. In 1994 part-timers were further brought in to resource the extended opening hours from 6 pm to 8 pm in CSCs ("London Link." April 1994). Part-time CSRs introduced from 1991 to 1994 worked on 18 – 30 hours 'flexible contract in which additional hours were

paid at the basic rate up to a total 37 hours per week. As the existing CSRs did not want to work for those unsocial hours, the union allowed BT to use part-timers in CSCs for Saturday and evening work on the 18 – 30 hours. Once the gate for part-timers was opened, they flooded into CSCs because BT only recruited part-timers from 1991 onwards (CWU Thames Valley Clerical Branch. 1997). The proportion of part-timers in CSCs was already well over 50 percent of the total CSRs in 1997. As shown in Table 9 – 3 below, the number of part-time workers in clerical grades increased significantly from 1988 onwards with part-time operators shrinking to 1/5 of their 1991 total by 1996.[9] The number of part-time operators was greatly reduced by redundancies which in turn were due to new technologies. As of 1998, the proportion of part-timers in '150', and '151' CSCs represented 54 percentage of the total permanent CSRs.

Table 9 -3 **Part-time workers by grade in BT**

	1988	1991	1992	1993	1994	1995	1996
Operators	3,753	5,533	3,882	2,193	1,966	874	1,103
Clerical	758	1,583	2,738	3,182	3,338	3,576	4,408
Others	3,449	2,234	1,228	654	687	964	1,239
Total	8,031	9,526	8,069	6,232	6,213	5,620	6,971

Source: BT Employee Statistics in each year.

Part-time CSRs were supposed to cover Saturday and evening time (6:00 pm – 8.00 pm). They then began to be deployed to cover day time alongside full-time CSRs. More than half of agency workers in CSCs, NI, OA and Telemarketing centres have been part-time agency workers. Part-time staff on 'flexible hours" contracts at CSCs had to work different hours with a range of 18 – 30 hours each week. Their work hours were flexible, depending on the work volume each week, their attendance patterns were not

[9] . The number of part-time workers in clerical grades in Table 9-3 did not only include part-timers at CSCs but also those at other clerical functions.

certain. In 1995 these 'flexible hours' part-time contracts changed to part-time contracts involving more or less fixed hours between 18 – 30 hours (BT. 10 Sep. 1995). The continuous pressures from the union to reduce part-timers in CSCs, NI, and OA, together with the complexities involved in allocating time slots to part-timers, have led to upgrading the status of some part-timers to new flexible full-time contracts as detailed later in this section.

Outsourcing

Outsourcing may be different from sub-contracting in that outsourcing involves contracting out previous in-house activities to outside firms for a long period of time, whilst sub-contracting involves, often repetitive, one-off work being given to outside firms. The massive increase in the outsourced jobs has resulted from BT's repositioning strategy, which focused on hiving off "non-core" activities such as cleaning, catering, security and building maintenance. BT reduced cleaning and catering jobs from 5,600 in 1987 to zero in the mid-1990s through oursourcing. Various services such as security, lift maintenance and motor transport work were outsourced (CWU Voice, 1995; 1998). Building facilities maintenance of over 8,000 buildings across the UK has also been contracted out to a small number of firms (BT. July 1999). Driving work was put up for in-house bids to compete against outside firms, which made drivers concede on the introduction of agency drivers, statutory breaks and flexible attendance (CWU Voice, April/June 1996). The effects of outsourcing has been considerable job cuts and a worsening of working conditions in the functions concerned.

BT's pursuit of external flexibility through the widespread use of agency staff and part-timers as well as the outsourcing of non-core activities mirror BT's consistent cost-

reduction strategies, having important implications for work and employment relations within BT. Preoccupied with 'headcount', the overriding, if crude, criteria of the City of London for assessing the efficiency of BT, BT management was able to further cut permanent employees not only through massive redundancies but also by relying on external flexibility. The massive job cuts in the 1990s thus obscure the fact that a significant number of permanent employees (about at least 20,000 jobs) have been simply replaced by agency workers, part-timers, or outsourced jobs. Viewed in the British context, however, the increased use of non-standard employment in BT is to align itself with the general trend reported in 1998 WERS (Cully et al. 1999. 32 – 38). Employment in BT which was characterised by internal labour markets, relative homogeneity and employment security, has been externalised, casualised and more heterogeneous. The precarious workforce has not just been used for simple tasks or during peak time and unsocial hours, but also for core tasks in daytime which permanent full-time employees had previously undertaken. This does not support the argument for numerical flexibility related to non-core work in the 'flexible firm' model. Employment within BT has been fragmented into full-time permanent employees, new flexible full-time employees (only at CSCs), part-time permanent employees, agency staff and contractors. There has emerged a new status hierarchy, a stratification especially among workers at CSCs, NI, OA and Telemarketing: full-time permanent employees at the top; new flexible full-time employees next; part-time permanent employees in the third place; and agency staff at the bottom. This stratification partially matches skill polarisation among these workers with different status. Agency workers are supposed to take simple, repetitive calls such as 0800, directory enquiries, while full-time CSRs are required to take more complex calls or to sell services proactively in

CAS or less complex calls in HelpDesk. The differentiation of status among workers indicates how BT recruits employees from agency workers as the port of entry to eventually full-time permanent employee status.

The union has unsuccessfully made various efforts to prevent BT from increasing these temporary workers. Despite the successes of the strikes by London technicians in 1997 and by CSRs in Nov. 1999, the union was not able to rely on strikes because the union fear that they might have undermined cooperative relationships with the company, and that any failure would have been a disaster to the union. As a consequence of the big increase in atypical employment, the influence and bargaining power of the union in CSCs, NI, OA and Telemarketing centres seem to have significantly declined. However the recent strike at CSCs may be a turnaround in the hitherto declining union influence. Agency workers and part-timers under the conditions of under-staffing have often had little choice but to work regularly beyond their contractual hours. These workers vulnerable to management whim often bear the brunt of 'hard control' in CSCs, NI, and OA.

9.2.3. Time Flexibility

The third dimension of labour flexibility that BT management has pursued is 'time flexibility'. Time flexibility means using the existing workers more flexibly in order to cover extended working hours. BT sought the extension of working hours including weekends and evenings to meet customer demands and to compete with new telecoms operators who were already providing such services. The issue was how to extend the working hours of the existing workers with few more costs or no premium rates. BT initiated the comprehensive CSIP (Customer Service Improvement Programme) from

1993, which introduced the new attendance patterns in the field including weekends and evening hours and overhauled field management structure including the creation of FMs. BT, faced by the existing CSRs' objection to the introduction of evening hours or weekend work, brought in more part-timers, agency staff and transferred some permanent part-time workers to the new full-time contracts in order to cover weekends and evening time without any premium.

Time Flexibility On the Access side

The existing attendance patterns in the field were to work 37.5 hours per week on Monday – Friday either 5 days between 8 am – 5 pm, or 9 days fortnight or 14 days in 3 weeks between 7.15 am and 6.15 pm. The new attendance pattern proposed by BT provoked anger and strong resistance among field technicians. Although BT revised the original proposal in the face of field technicians' strong opposition, the union was reluctant to accept the revised proposal. However, BT indicated that it would unilaterally implement the new attendance patterns without any agreement with the union, if the union continued to refuse the proposal. After protracted negotiations over one and half years, BT and the NCU reached an agreement called 'CSIP Attendance Patterns Agreement' in Oct. 1994.

According to the new attendance patterns, there were four options that 24,000 field technicians could choose between 7 am and 7.30 pm (except Option D) working weekly 37.5 hours: Option A - 10 hours work for 4 days a week out of Mon.- Sun.; Option B – 10 hours for 4 days a week out of on Mon. – Sat.; Option C - 5 days for 8 hours 10 minutes a week on Mon. – Fri. ; and Option D - 3 days for 12 hours 40 minutes a week out of Fri.- Tues. between 7 am and 9 pm. Although the move into the new attendance

pattern was supposed to be voluntary, there was much pressure from management to take one of the options. Those who had opted for one of the four options were given one-off payments of £1000 for option A and B and of £400 for option C and D. Those who opted for option A and B were given priority in overtime or Saturday or Sunday extra work with double rates. Saturday and Sunday have become normal working days without premium rates. Field technicians who choose option A and B will not have to work more than 25 Sundays and Saturdays a year and £17.50 for every Saturday or Sunday work was given to the field technician.

In addition to that, 'flexible attendance' involving up to 1 hour before or after scheduled attendance hours on a given day was attached, which was designed for finishing jobs to target time or completing tasks which would otherwise require another visit the next day. These extra hours were limited up to 4 hours either in credit or debit and the field technician can then take credited hours off all at one time (BT/CWU Oct. 1994). Field technicians who had signed CSIP were allocated to increased number of late duties on the roster, while those who had refused to sign CSIP were under the constant threat of being disadvantaged as a punishment (CWU Peterborough Branch. 1997; 'CWU Voice' June 1997). Subsequently all technicians could not help accepting CSIP.

The other issue connected to CSIP attendance patterns was evening work in the field called 'WITHOD' (Working In The Hours Of Darkness). As WITHOD tends to involve risks, the union asked more protection for these affected technicians. When the company turned down the call of the union, the long dispute started. The union drew up a list of activities which are deemed too "dangerous and unacceptable" to perform in the poor light, and above all, insisted that no 'overhead' or ladder work should be carried out

in the dark and that any outdoor work should involve at least two people ("CWU Voice"April 1995, Oct. 1995). After a one and half year long-running dispute over the WITHOD, modified proposals on safety of WITHOD were accepted in July 1997 in a CWU ballot. Evening work in the field has become available.

However, 9,500 business engineers working at Business Division were able to defend 5 days working attendance patterns on Mon. – Fri. between 7.15 am and 6.15 pm with 9 days fortnight working. BT wanted to change the attendance patterns but 9 days fortnights remained unchanged after 12 month talk because the degree of the unity among field technicians working for business customers ("CWU Voice." Aug/Sep. 1995, Dec. 1995).

The important consequence of CSIP attendance patterns was a productivity drop because many technicians had a mindset of fixing a certain number of faults a day regardless of day length (BT. Sep. 1995; "Crosstalk.' April 1997). With the help of CSIP BT was able to use the workforce for extended hours with less cost but the cost-saving elements of CSIP was offset by the increased levels of field engineers' overtime because there were not enough staff to do work.

Time Flexibility On the Clerical Side

The traditional attendance patterns were weekly 37 hours between 8 am to 6 pm on Mon – Fri. CSRs normally worked on Mon.– Fri. between 8.30 am and 5.30 pm, excluding breaks. When there were still gaps and shortages of people at certain times, for example, Friday afternoon, CSRs had to work voluntarily or on a rota, once every six weeks. The attendance patterns were flexible, varied locally and lacked very clear rules until CSCs were set up. When BT created CSCs in the early 1990s, it wanted more

rigid and scheduled attendance patterns, taking into account the match of call volume with human resources. To work out time slots for CSRs to match call volume patterns, Resource Management teams were set up for each zone covering a number of CSC sites.

In January 1995 'Extended Hours' agreements in '150' CSCs extended opening hours in '150' CSCs from 8 am - 6 pm on Mon. – Fri. to 8 am – 8 pm on Mon. – Sat. (CWU. 23 Jan. 1995. LTB). To cover extended opening hours, the existing CSRs were required to work after 6 pm on a voluntary overtime basis. The existing CSRs had to work after 5 pm in two or three times a week, often late nights, and covering different working hours in different time slots each day. When new marketing campaigns were initiated, the level of late night attendance for the existing CSRs became higher. At the same time the number of part-timers to cover 4 pm – 8 pm slots continued to grow enormously.

In spite of much of extended hours covered by part-timers or agency workers, BT had to pay for the existing CSRs' evening work or Saturday work at premium rates. The union felt a need to block the influx of part-timers into CSCs and to increase full-time CSRs. Thus, BT and the union came up with the new flexible full-time contracts which were offered to some existing part-time staff in CSCs who had good performance records (BT/CWU 1997). Compared with the existing full-time CSRs' attendance patterns of weekly 37 hours between 8 am and 6 pm on Mon. to Friday, the new flexible full-time staff are scheduled to work their shift between 8am and 8pm on Monday to Saturday as their normal working hours. Depending upon the need to meet customer and work profiles, each employee attends work for 5 - 11 hours duration and the number of their attendances per week will be determined by local or national requirements.

Attendance may change up to one hour in either direction with a minimum 24 hours notice to meet short-term requirements. The attendance patterns of the new flexible full-time CSRs and part-time CSRs have been used to cover peaks in working patterns, and early morning, evening and Saturday work. The CWU has had chances to create some permanent full-time jobs for existing part-timers and to improve the ratio of full-time jobs in CSCs.[10] The new full-time contracts also provide more flexible attendance arrangements for the existing full-time and reduce the requirement for their attendance at the beginning and end of the working day. Significant differences in attendance patterns have resulted between the existing full-time CSRs and the new flexible full-time contracts in a way which is more favourable way to the existing staff.

Opening hours of '150' and '151 CSCs are between 8 am and 6 pm at 30 sites, between 8 am and 8 pm at 19 CSCs, and 24 hours at Leicester CSC. The different opening hours among CSCs reflect variations in call volume depending on the time of the day. The extended opening hours and Saturday opening were covered initially by agency staff, part-timers and overtime of the existing staff but which are now covered by agency staff, part-timers and the flexible full-time CSRs and sometimes the existing staff.

In short, time flexibility basically involves the extension of working hours including evening time and weekends in order to meet customer demands at any time. Time flexibility in the field has been achieved by making the existing field technicians work on Saturday, Sunday or evening hours. Time flexibility in CSCs has been made

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[10] . With the agreement of the new flexible full-time contracts 400 part-time staff were temporarily given full- time contract and 722 part-time staff who accepted the offer were on a waiting list.(IDS. Oct. 1997. 'IRS Report' No. 747)

possible by recruiting more agency staff and part-timers, and through the new flexible full-time contracts. Time flexibility that BT has pursued without incurring more costs has led to unsocial hours of work for field technicians and a casualisation of employment in CSCs.

9.2.4. Spatial Flexibility

Another dimension of flexibility in BT which has recently developed, is spatial flexibility. Spatial flexibility is a shift away from office-based or fixed workplaces towards homes or mobile vehicles, or means a share of a space/desk by a number of people. There are three forms of spatial flexibility found in BT: 'garaging at home'; 'hotdesking'; and 'homeworking'. The motive behind spatial flexibility has been in the need to increase effective working time and how to utilise office or building space from the view of property portfolio. Developments in spatial flexibility have been greatly facilitated by new technologies.

Spatial Flexibility On the Access Side

Before 1992, field technicians had to go to their depot at the Telephone Exchange Centres (TECs) every morning to collect their vehicles, jobs allocated for the day and parts needed for installations or repairs. At the end of work they had to bring back the vehicle to the depot and to fill in their log about what they did that day. Their base and contact points were the depot at the TEC. Field technicians could meet their colleagues and managers, and exchange information at the depot, which provided the union with good contact and communication opportunities.

From around 1992 onwards BT encouraged field technicians to take their van

straight back to their home from the field, to 'garage the van at home' and to go straight to the work from home. The allocation of the first job directly to field technicians' homes via the hand-held terminal, facilitated field technicians to garage their van at home. Although the union asked field technicians not to garage at home, field technicians found that 'garaging at home' was very convenient. Field technicians have been able to save travelling time and money from their home to the depot through 'garaging at home'. BT can also increase effective time by saving time for field technicians to go from the TEC to the first job and to come from the last job to the TEC. It does not need places for garaging depots for vans any more. BT has been able to rationalise TECs by sales, using them for other purposes, or leasing them. Field technicians now garage at home and drop by their TEC from time to time when they have business with their manager. They can collect parts from the Dead Drop Centres which they order directly. BT no longer has stores in which there are spare parts. Instead field technicians should carry enough of what they need on their van and they would have to order them as they are required.

As a result field technicians have lost regular contact with their colleagues and have become isolated and individualised. In the past they worked closely as a team and often had football or cricket matches with other teams. There was some team spirit, although work was basically done individually. Even after garaging at home, BT still hollowly talks about work team members (WTM) or team spirit but it is cynically received by field technicians. Field technicians are said to have lost the 'physical base' concerning their contacts and their work centre. Their feeling of the psychological loss is expressed by one field technician as follows.

> "We miss the contact of how things are generally going and general feedback between people. That's sadly missing. In the old days you could go down to telephone exchange centres in the morning at 7:30. You were guaranteed to see all the staff there by 8:30. You could have a general chat. If you go down the telephone exchange centre now, there are still some people there, but it is like a ghost town. You can wonder around looking for people without finding them."

Garaging at home weakens the 'work community' among field technicians. Consequently the union has had difficulty in contacting its members. The union has thus had to rely on regular mailings of leaflets to its members and mobile phones to contact them.

Spatial Flexibility On the Clerical Side

The average accommodation costs including information systems costs in 1999 were £4,200 per person. BT is looking to reduce these costs to £3,100 per person under the 'UK Office Plan' programmes. Both hotdesking and homeworking are being pursued as a way of reducing costs through increases in the extent of utilisation of space and facilities and changes in location and reduction in space volume.

Hotdesking: The increasing number of part-timers and agency staff used in CSCs has also led the number of desks and space to increase proportionately as well. The overall provision level of desks to people has been greater than 1:1. In a survey of 300 buildings 59,631 of 80,458 desks were found to be occupied with 11,118 desks being vacant, of which 9,709 had unused equipment standing on it as a cost of £129 million per year. In another survey of the existing 'Workstyle' buildings, the rate of daily utilisation of the desks remained 40 per cent (CWU Briefing 2/July/1999). From management's point of view, the allocation of a desk to each part-timer or each agency staff in the same way as for the permanent full-timers appears to be wasteful. BT

estimates that a simple reduction in the average ratio of desks to people from 1:1 to 1: 1.2 would lead to a reduction in the annual running costs by £ 28.5 million. So the lay-outs BT has brought in are based on an open-plan style with many desks crammed in. A new practice called 'Hotdesking' means that a number of people share a desk at different times. Hotdesking in BT had its roots in telemarketing centres where the majority are part-time agency staff and they do not have to have their own desk. Workstations at CSCs are set up to be used by anybody. They can go wherever there is a desk and a workstation set up for them. Instead, a locker is provided for each staff in which personal documents and things can be stored. For example, 30 - 40 computers and chairs in one CSC were removed in 1998/9 so that staff now have to share desks. Hotdesking has not been fully implemented so far but some of it is being brought in to CSCs across the country. The similar practice is being introduced for sales people in BT who are constantly on the move from one place to another and stay little at office. For those mobile staff, with the assurance of booking in advance, another form of Hotdesking called 'Flexidesks' offers a workstation in an office with local area network(LAN), access to printing and a telephone ("BT Today." July 1999). BT plans to achieve a ratio of at least one work-station to 1.2 office-based people across the country by March 2000 (BT. May 1999. 'BT Today'). Hotdesking is also being brought in with homeworking in CSCs. BT wants to introduce Hotdesking as an established way of working.

Homeworking: Alongside Hotdesking, BT has initiated homeworking (often called teleworking) as a new working practice. BT has already produced guidelines for its managers which recognise that homeworking has a number of advantages (IDS. April

1994). Yet the launch of homeworking has emerged as part of the programme 'Option 2000'. Above all, the aims of homeworking are driven by BT's efforts to cut estate costs over the next years. There were already 3,500 staff working from home in BT. The current initiative, launched at the beginning of 1999, is designed to regularise what were ad hoc arrangements. The number of homeworkers is projected to rise to 7,500 by April 2000 following the implementation of 'Option 2000'. BT hopes to persuade at least 10,000 of its office staff, especially CSRs in CSCs, NI, and OA and, secretaries, and data processing staff to work from home, communicating with customers and managers by fax machine, telephone and internet. Homeworking is likely to be used alongside hotdesking because homeworkers work for the majority of their time at home. Exactly how many people in BT would volunteer to work from home has yet to be seen. The programme is being run by Facilities Management (FM) solutions, focusing upon how to better use BT office space scattered around the country. The principal reason behind the new initiative for homeworking is BT's need to dispose of hundreds of surplus properties across the countries (FT 12th May 1999). BT could save £6,000 per desk a year by saving its accommodation costs through homeworking ("BT Today." Aug. 1999).

Spatial flexibility has led to the individualisation and isolation of workers with such benefits as convenience and cost savings returning to them. This has raised significant problems with the union. As seen in the field, spatial flexibility may lead to the loss of the physical basis on which the psychological attachment of individual employees to the company has been laid and socialisation among employees has taken place.

Overall, these four dimensions of flexibility sought by BT management have

resulted in a number of outcomes. Whilst they have helped BT save costs, customise services and therefore create a 'lean service' work system, employment is fragmented and stratified, and working conditions have become divergent. There are some benefits to workers such as multi-skilling, small convenience and cost savings. However, there are more negative consequences such as weakened employment security through the externalisation of traditional internal labour market, unsocial working hours, individualisation, and the loss of physical attachment.

9.3. The Flexible Use of the Workforce in KT

9.3.1. Task Flexibility

Task Flexibility On the Access Side

There has been a clear job demarcation between overhead field technicians and underground ones, though there was no tradition of job control at the workplace. Overhead field technicians are responsible for installations and repairs from pole to customer premises and within customer premises, while underground field technicians are in charge of maintenance, repairs and renewals of underground cables from exchanges to poles. Overhead field technicians are supposed to have both installation skills and repair skills in overhead wires and within customer premises. Underground field technicians are supposed to have both maintenance and repair skills such as fault findings and cable jointing as well as renewal skills. Overhead technicians are divided into two groups: one group installing lines and repairing faults; and the other group doing renewal work or proactive work. Field technicians in the first group are flexibly divided to undertake installations or repairs, depending on work volume at their local patch. However when it comes to a rainy season in summer and a good deal of faults

occur, both all technicians in the first group undertake repairs, often joined by the second group of technicians. When it comes to spring, there are demands for plenty of installations because many people move their homes. Nearly all technicians in the first group and the second group join installation work.

Overhead field technicians are multi-skilled enough to carry out installations and repairs in overhead cables and within customer premises. In this way field technicians, though they are divided into underground and overhead as well as into groups along the line of specific job tasks, have been used flexibly. Field technicians either overhead or underground possess task flexibility in the sense that they are skilled to install lines and repair faults. However, overhead technicians are not able to do underground work and underground technicians cannot carry out overhead work. KT tried to make efforts to multi-skill field technicians in both overhead and underground work in the first half of the 1990s but the efforts were only partly successful. Field technicians tend to be multi-skilled in both overhead and underground work in the countryside and small towns because of work requirements due to the geographical dispersion of the network. By contrast, they are still divided into overhead and underground technicians in big cities despite the company's emphasis on multi-skilling in the first half of the 1990s, since they are busy enough to do only their own overhead work or underground work. There have not been further systematic attempts to multi-skill overhead work and underground work from KT management afterwards.

What is more significant in terms of skilling is the need to have new skills to install ISDN II, internet and, more recently, ADSL. Since 1998, the demands for them have increased and some overhead field technicians are required to have those skills. Although a number of overhead technicians in local telecoms centres have been trained

to install, they do not still have enough skills to install those services and to deal with personal computers. Another important but unsuccessful attempt was to add selling function to overhead field technicians who have opportunities to meet customers. So 'field operations were integrated into marketing function at each local telecoms centre in 1996 (KT. March 1997). Overhead field technicians were required to use meeting opportunities with their customers in order to sell service products. However, the attempt was short-lived with a return to the former situation in 1998 because field technicians were trained little and were not prepared to sell service products.

Task Flexibility On the Clerical Side

There are two channels of customer services in KT. One is through CSCs which were newly created and have shown an increase in its numbers and size over the years. The other is through front-desks in local telecoms centres which account for two thirds of customer services, though they are doomed to disappear in the future. CSRs' skilling depends on the range of services provided through each channel. Although each CSR on the front-desk is supposed to undertake one or two specialised tasks, his/her jobs may change from one task to another at front-desks or back office over time. Moreover, if it comes to a busy time for a specific job, CSRs are flexibly deployed to deal with busy tasks. Or, if any CSR who has a certain position on front-desks and is on sick leave or annual leave, one of the remaining CSRs should take on the task. CSRs at front-desks are supposed to be multi-skilled enough to carry out any task required at front-desks. Although CSRs at front-desks have been recommended to actively sell service products whenever there is an opportunity, they are not normally selling service products. Only 28.6 percent of CSRs in the Seoul Regional Division are said to have tried to sell

service products on top of the services wanted by customers (KT Seoul Regional News. 3rd Aug. 1998). There has been no consistent effort from management to ask CSRs at front-desks to actively sell service products. There were around 300 service products of which some 30 products were normally available at local telecoms centres in 1999. Since CSRs at front-desks lacked training, they did not have the deep knowledge of those 30 products required to explain things to customers. There is no clear demarcation between customer services work and administrative work. Clerical grades can be more flexibly deployed to work as CSRs at front-desks or to undertake administrative work in the back office. Clerical grades have been circulated among a number of jobs over the years. There are also a lot of CSRs on front-desk duties who were redeployed from operators' jobs when many of the former operators were not needed. They still keep their grade as operators but work as CSRs.

By comparison, CSRs in CSCs are required take service orders and to answer various enquiries except billing enquiries. The customer information system that CSRs use is so simple that they cannot answer billing enquires. CSRs in CSCs are not required to actively sell service products but take service order reactively. They undertake a narrow range of tasks, while their work is Talyorised with the introduction of call centre technologies. There is a significant difference in the range of skills used by CSRs between front-desks and CSCs. The extent of CSRs' task flexibility in CSCs is more limited than that on front-desk duties.

In short, there has been neither any consistent effort to multi-skill workers in the field nor at front-desks or at CSCs on the part of KT management. There has been no job control tradition at the workplace. Instead there has been relatively flexible labour

deployment in neighbouring jobs, depending on circumstances or based on job circulation. Thus there is some built-in task flexibility in the field and at front-desks. Task flexibility in KT has something to do with grading. Not only are grades broadly defined, but employees in the same grade can be flexibly deployed to a number of jobs, for example, in the field or at front-desks and back office. Employees in KT are required to circulate a number of different neighbouring jobs over the years. However, CSRs in CSCs are constrained to use a narrow range of skills such as general enquiries and reactive sales because of limited technological capabilities.

9.3.2. External Flexibility

External Flexibility On the Access Side

Up to the end of the 1980s when the network expanded rapidly in KT, many contractors were brought in to carry out civil engineering work, to lay underground cables and to install telephone lines at homes and offices. Almost all installations on the access side and cabling work were subcontracted to outside contractors because KT management did not have to recruit many permanent field technicians in order to meet big demands for installations and cabling work, which would eventually be followed by a sharp drop in demands for such work. Installations contracted out were paid according to the number of telephone lines. At the same time temporary field technicians were used on fixed-term contracts alongside permanent field technicians. After experience for a number of years as contractors or temporary workers on fixed-term contracts, these workers were given places as permanent field technicians as long as they satisfied certain conditions such as the acquisition of official qualifications and some experience. Contractors or temporary workers on fixed-term contracts have become an essential

route for recruiting new permanent field technicians ("Korea Telecom News." 20th July 1996).

When high demands for installations declined in the early 1990s, KT management initiated the two cost-conscious or rationalising measures with regard to subcontracts. Most installations were taken back to in-house work from sub-contracting because the number of installations declined substantially and partly because work undertaken by contractors revealed many problems such as shoddy or careless installations which would be likely to engender faults later. The existing permanent field technicians were able to carry out installations and fault repairs at the same time. Instead KT management has begun to increase temporary workers on fixed-term contracts on the access side. They work alongside permanent field technicians or often under the supervision of permanent field technicians. In 1996 1,111 contractors (12% of all 8,638 access jobs) such as cabling or cable renewal were used and 1,920 temporary workers (21%) were used for installations and repair jobs on the access side (KT Marketing Team. Nov. 1996: 188). In 1999 the number of contractors for cabling or cable renewals reduced significantly and the number of temporary workers used for installations and repair jobs on the access network was 1,997 (KT 1999d). According to field technicians, the number of temporary workers on fixed term contracts has more or less stabilised over the years, though KT has reduced the number of permanent field technician as part of the downsizing effort of the company since 1997.

External Flexibility On the Clerical Side

Apart from directory enquiries centres, temporary workers in CSCs and front-desks have remained small. The number of temporary workers at '100' CSCs (equivalent to

'150' CSCs in BT) increased from 42 in 1997 to 420 in April 1999 and temporary workers at front-desks numbered 146 in April 1999. The relatively small number of temporary workers at front-desks is due to the internal transfer of the technically redundant workforce, especially operators. This internal transfer was encouraged as a means of employment adjustments under the strong employment security which continued until 1997. While KT has reduced the number of technically redundant jobs as operators and telegraph delivery, those workers have now been redeployed into clerical jobs at front-desks or back office where jobs have expanded. In 1997 there were 788 redeployees out of the total 4,483 workers at front-desk. The grade, which is supposed to be deployed at front-desks and in CSCs, is 'Clerical Grade'. However, clerical grade workers accounted for 40.8% out of the total number of workers at front-desks, thanks to the redeployment exercises. 1,051 workers in manual grades were deployed into front-desk jobs (KT. June 1997). As these redeployed workers have kept their grades, there have been increasing mismatches between jobs and grades. Any attempt to regrade to realign jobs to grades would be potentially explosive as many workers have their interests in the current grading structure in terms of pay level and promotion opportunities.

The increase in the number of temporary workers including agency workers has recently been conspicuous at '114' directory enquiries centres. Temporary workers including agency workers at '114' directory enquiries centres have greatly increased from 1,003 (22.7%) to 2,883 (61% of the total operators used) between 1997 and April 1999 (KT. June 1997; KT. April 1999). In Feb.1997 2,771 temporary workers employed at '114' directory enquiries centres were composed of 1,234 workers on the fixed-term contracts, 1,280 part-time workers and 257 home-workers (KTTU Women's

Department. Feb.1999). Part-time or home-workers are not given permanent positions but temporary ones.

The number of both temporary workers and subcontracted jobs shows significant increases from 4,694 workers in 1995 through 5,755 in 1997 to 7,419 in April 1999 (KT 1996: 458; KT June 1997; KT April 1999). The proportion of temporary workers is scheduled to increased to 80 percent at '114' directory enquiry centres, at least 60 percent at CSCs, fault reception centres, and Main Distribution Frame and at least 30 percent at front-desks and support functions (KT, Dec. 1998). 1,800 jobs were outsourced during 1999 in construction, building maintenance, power operations and fault reception centres. Thus KT plans to increase the ratio of temporary workers from around 8 percent in 1997 to 15 percent in 2000, while cutting the number permanent jobs from 59,919 in 1997 to 51,241 in 2000 (KT. July 1998).

These increases are largely indebted to the rise in the number of temporary workers in directory enquiries centres and in the field. The main drivers of this casualisation are big differences in labour costs between permanent workers and temporary workers and the deregulation of labour markets in Korea. For example, permanent operators at directory enquiry centres earn four times as much as temporary operators and permanent field technicians earn two and half times as much as temporary field technicians in the field (KT. June 1997: 62-4). As long as the gaps in labour costs between permanent workers and temporary workers remain large, KT management would increase temporary workers. Big increases in temporary workers since 1997 also reflect the deregulation of labour markets following the financial crisis. Moreover, the union, the KTTU, has opposed any plan to outsource in-house work but it has made little efforts to stop KT management from recruiting temporary workers.

The increasing use of temporary workers, together with the widespread use of lower grades for jobs at front-desks, has given rise to a couple of outcomes. Employment is fragmented between permanent workers, manual grade workers, contractors, temporary workers and part-time workers. Temporary workers have increasingly replaced permanent workers in directory enquiry centres and in the field and begun to threaten employment security. These workers are used not only for peripheral activities but for core businesses such as in CSCs or in the field. These temporary workers are screened about their performance and used as a route for recruiting permanent workers.

9.3.3. Time Flexibility and Spatial Flexibility

Working hours are 44 hours in Korea with Saturday being a normal working day until lunchtime. KT has had an old working arrangement with regard to overtime working, which pays for 45 minutes overtime pay per day to all employees in return for overtime work whenever necessary. The arrangement has given KT management much time flexibility. For example, KT management has been able to ask employees to work for 1 hour overtime if there are many jobs to do. Many workers in the field, front-desks and CSCs normally work one hour or so overtime. KT management has only employed around 75 - 80 percent of the workforce required as a whole, assuming that 10 percent would be filled by temporary workers and overtime worked by the existing workforce would account for the other 10 – 15 percent.

Three or four field technicians in local telecoms centres carry out mostly repair jobs on Sundays or holidays on the basis of time-off in lieu in the field. A couple of field technicians wait and repair faults until 9 pm which would occur to the installations or

repairs just done on the day. CSRs who work at front-desks often perform administrative work after 6 pm. Working hours in CSCs was from 9 am to 6 pm up to 1997 and was extended from 8 am to 7 pm from 1998. A quarter of CSRs in each CSC start to work at 8 am and end at 5 pm and another quarter of CSRs start work at 10 am and end at 7 pm on a rotating basis. Furthermore a number of employees in three CSCs take calls from customers for 24 hours 365 days a year (KT Marketing CS Team. May 1999). At directory enquiry centres permanent operators work for normal working hours (9 am - 6 pm), while temporary workers, temporary part-timers or home workers work at night, Saturday afternoon or on Sunday. Time flexibility has been a long-standing practice to a certain extent in KT. In the latter half of the 1990s working hours at CSCs have been extended to meet customers' demands.

There was an attempt to introduce a kind of spatial flexibility in KT. On the access side there was a pilot to introduce 'Garaging at Home' in 1996 in order to reduce travelling time and to increase effective time in the field. Field technicians arrive at the local telecoms centre by 8 am. After their 'Good Morning meetings' lasting for 30 minutes, they leave the centre for the first job at 8.30 am, come back to the centre at 12 am for lunch, go back to the field at 1 pm and come back again to the centre at 6 pm. KT estimates it takes 1.5 hours for field technicians to move back and forth between the centre and the field twice a day and thereby reducing actual working hours. The 'Garaging at Home' trial was met with strong resistance from field technicians. The main reason for field technicians' resistance was largely cultural. In Korea there has been a considerable bias against manual work vis-à-vis clerical work. Manual work tends to be looked down upon. According to the field technicians interviewed and the manager responsible for the trial, KT employees who work in the field, pretend to work

as clerical workers at the office environment to their relatives and neighbours. If the field technician garages at home and leaves his home for the field with his working clothes, his neighbours would easily notice that he works in the field. The fact that he works in the field could influence his relationship with other families and his children's eventual marriage. Field technicians fear that their relatives and neighbours would notice their jobs are manual. Apart from the cultural obstacle, KT was not well prepared for the introduction of 'Garaging at Home' in terms of equipment essentials such as handheld terminals and small cars (KT Marketing Team. Nov. 1996). So the attempt of KT management to extend garaging at home failed.

Apart from its pursuit of increasing external flexibility and some long-standing built-in flexibility in time and tasks, KT has not made much effort to seek flexibility in the use of the workforce. To cut costs as part of its restructuring of the workforce KT management has increased the number of temporary workers, especially in directory enquiries since the mid-1990s, while it has reduced the number of permanent workers. KT management has used more temporary field technicians in the field, whereas reducing contractors for cabling and installations. Task flexibility in CSCs has been limited by the lack of the appropriate computer system, while CSRs at front-desks are required to be flexible enough to undertake various kinds of tasks. As there is no tradition of job control in Korea, workers and the union have shown little resistance to a more flexible deployment of their work in terms of tasks, time and grades except cultural resistance to a specific working practices such as garaging at home.

9.4. Conclusion

The evidence suggests that there are some common developments in the flexible use of the workforce between BT and KT but there are more differences. These developments have basically been driven by cost reduction strategies in both companies, though the degree of emphasis and rigorousness is very different. BT management's pursuit of various forms of flexibility has been greatly facilitated by management's legitimation of customisation and efficiency-enhancements. KT management has not formulated flexibility as its consistent agenda.

There have been significant increases in external flexibility in both cases over the years, though the extent to which BT uses the non-standard employees has been greater than that of KT. BT has extensively used atypical workers at CSCs, NI, OA and Telemarketing centres as well as cabling and cable renewal work but not on the access side, whereas KT has widely used temporary workers on the access side and at directory enquiry centres. BT has successfully removed job demarcations in the field to help achieve task flexibility through multi-skilling. By contrast, KT has shown some built-in task flexibility in the field. It has multi-skilled field technicians for overhead and underground work in the rural or town areas. BT has also attained task flexibility through multi-skilling in its CSCs. CSRs at front-desks are supposed to carry out various tasks, whereas task flexibility in KT's CSCs has been limited by the delayed deployment of new technologies. BT had to buy out time flexibility from field technicians or employ part-timers at CSCs to cover evening work or weekend work both in the field and at CSCs. KT has had a long-standing arrangement of flexible overtime work and weekend work, which has enabled KT management to use the workforce more flexibly timewise. Although both BT and KT have extended the coverage of working

hours to serve customers, how to use their workforce flexibly in terms of time still shows considerable discrepancies between the two cases. BT has shown a significant progress in spatial flexibility in the field, whereas KT unsuccessfully piloted the similar practice for spatial flexibility. BT has gone to some way to, if still in initial stage of, spatial flexibility in CSCs and others, while KT introduced one occasion of homeworking.

How can we explain these significant differences between the two cases in terms of various dimensions of flexibility? Some built-in practices in KT such as task flexibility and time flexibility are due to the absence of job demarcations and to relatively flexible labour deployment in Korea. By contrast, task flexibility and time flexibility in BT are outcomes of management's continuous efforts to reform job control and fixed attendance patterns. This tells us that similar kinds of practices may originate from different contexts. The lack of new technologies has resulted in narrower range of task flexibility in KT's CSCs than that in BT's CSCs. Although external flexibility has been sought by management in both companies, differences in the extent of using atypical workers and in areas where they are used between the two arise from the existing practices and management strategies. For example, past contractors who installed new telephone lines were replaced by temporary technicians on fixed-term contracts in KT, while BT had no similar practices in the past. The small number of temporary workers at front-desks and in KT's CSCs reflects the internal transfer of technically redundant grades such as operators and telegram grade to CSRs' jobs under the strong employment security before 1997. The differences in the extent of external flexibility between the two may result from divergent management strategies. The role of trade unions is important in explaining external flexibility. For example, BT's attempt to

introduce contractors in the field was blocked by the union, whereas KTTU has shown little interest in the increasing use of temporary workers because temporary workers at first were not seen as threatening the employment security or working conditions of existing workers. Paradoxically, the continued refusals of the existing CSRs to work extended hours opened the way for bringing in part-timers and agency workers in BT's CSCs. Spatial flexibility in BT shows us that BT management has explored every possibility to reduce costs in managing labour and space, while KT management falls short of that.

The two cases also suggest that the flexibility firms seek may be more complex than suggested by the 'flexible firm' model. For example, although task flexibility sought in the field and CSCs in BT appear to lead to multi-skilling, intensified control via by the WM in the field and via CTI in CSCs has also resulted in deskilling or degrading of work. This results in multi-skilling in the general deskilling trends.

CHAPTER 10. CONCLUSION

We started with the research question of whether or not globalisation has led to a convergence of work organization in the telecommunications services industry. By looking at the relationships between variables and the mechanisms whereby global forces can be transmitted into work reorganisation, this study aims to test whether work organization is context-bound or context-free through a comparative case study, thereby contributing to the existing debate concerning convergence vs divergence. Work reorganisation in the two companies was evidenced through three major issues: work control systems; work rationalisation and customisation; and the flexible use of the workforce.

The next section will briefly summarise the key findings from the two case studies, including similarities and differences in work organisation in the field and CSCs or front-desks between the two cases. This is followed by a section that discusses how commonalities are interpreted in different contexts and seeks to explain how and by what mechanisms work organisation diverge between the two cases by diagramatically representing the interactive processes of work restructuring. The third section goes on to consider the theoretical implications of the findings and to suggest that we need a new theoretical model which integrates dynamic interactions between variables. The last section sets out the limits of this research and suggests the direction of any future research.

10.1. Key Findings - Similarities and Differences

Since 1990 BT and KT have not only reorganised their management structures but

also their work structure in terms of work control, work rationalisation and customisation, and the flexible use of the workforce. By looking at work restructuring as well as corporate restructuring, we are able to examine the ways and processes in which work is reorganised. The key findings from the current research can be summarised as follows.

First of all, BT has transformed work control systems. Its former bureaucratic control systems with a strong element of self-direction have developed into a form of 'hard control'. This means that BT management has intensified control over work volume, work quality and service quality by using various means such as performance measurement, surveillance, comparisons, threats, rewards, and new technologies. To reduce the negative consequences of 'hard control', BT management has also introduced a form of 'soft control' by means of coaching and empowerment, both of which loosen the effects of tight monitoring, giving employees some room to breathe. Thus BT has in place work control systems which combine 'hard control' and 'soft control' in quite a sophisticated way. These control systems, especially 'hard control', coupled with work rationalisation and the introduction of new technologies, have contributed to improvements in efficiency in the field and CSCs.

In KT the old bureaucratic control systems and self-direction have persisted in the field and at front-desks, though they have weakened, especially in CSCs. As part of management initiatives for changing corporate culture a 'hard control' system has emerged for improvement in quality of service. Thus hybrid control systems which mix the old self-direction and bureaucratic control with emerging 'hard control' have developed in KT.

Secondly, BT has, to a great extent, rationalised work processes and procedures

through standardisation, computerisation, routinisation, the separating core from non-core work, the proactive matching of work volume with human resources and the use of virtual conveyor belts in order to save costs and to increase efficiency. These processes of work rationalisation have resulted in significant reductions in self-direction and craft control, increased labour savings, the realisation of JIT principles, productivity improvements and work intensification. At the same time BT has implemented customisation of service delivery through control via customers, shortened lead-time, prioritisation, differentiation, punctuality, and provision of convenient services. Customisation in BT has contributed to JIT and, coupled with work rationalisation, has led to a 'lean service' system.

By contrast, work rationalisation in KT has occurred within the existing structure and has remained limited, though significant standardisation has been introduced in CSCs. KT has pursued customisation in similar ways to BT but the degree of customisation has remained fairly limited. However its main intent has been part of a managerial agenda to promote culture change. As a consequence the service delivery system in KT has retained important features of the existing one in the midst of gradual rationalisation and customisation. It has, to some extent, remained an unrationalised semi-autonomous system.

Thirdly, BT has achieved an increase in the flexible use of the workforce in the following dimensions - task flexibility through multi-skilling, external flexibility through the extensive use of non-standard workers and outsourcing, time flexibility through the extension of working hours to unsocial hours and spatial flexibility through sharing or saving office spaces. Increased flexibility provides BT with the ability to deliver services at low cost on a one-stop basis at the time when customers want to have

them, despite negative consequences for employees. By comparison, KT had already possessed a certain degree of built-in task flexibility or time flexibility in the existing work systems. External flexibility has been used widely but there has been little evidence to make consistent efforts to further task flexibility or to introduce spatial flexibility. Although there have been some developments in external flexibility, KT's workforce has been used less flexibly than that of BT.

Fourthly, there have been contradictory tendencies of deskilling and multi-skilling as well as a trend of skill polarisation in BT. Field technicians and CSRs are required to be multi-skilled on the one hand. However, they are not only subject to tighter performance control and automatic job scheduling but there have also been the systematic separation of core from supporting work, and of conceptual work from execution on the other hand. These conflicting tendencies tell us a more complex picture of recent changes in the workplace than is normally assumed. The stratification of CSRs into full-time, flexible full-time, part-time and agency workers, and differentiation between CAS, HelpDesk and Transaction Services have led to a trend of skill polarisation. Agency workers and CSRs at HelpDesk and Transaction Services are required to deal with short, simple, repetitive calls and experience deskilling, whereas CSRs at CAS are supposed to take calls demanding more complex enquires and services and are upskilled. There have not been systematic efforts to multi-skill workers from KT management. Following the slow consolidation of front-desks in local telecom centres into CSCs, tasks in CSCs tend to be more simplified than those at front-desks and therefore, CSRs in CSCs are deskilled in KT.

Lastly, related to these three dimensions of work restructuring, the respective management structures have been altered. On the one hand BT's management structure,

under its cost minimisation strategies as well as customer focus ones, has transformed an old supplier-centred one into a customer-oriented one, from a regionally-based one through a divisional one to one consisting in thinly sliced national business units and trading units. On the other hand, BT management has aggressively sought to reduce costs and to make operations more efficient and leaner by re-engineering business processes, consolidating and rationalising various functions and operations, rationalising and relocating offices and buildings, and downsizing. New technologies have been instrumental in providing economies of scale and scope for BT to introduce these processes. These structural transformations of the organisation have considerably impacted on work restructuring in terms of work control, work volume, work scheduling, external flexibility and matching of work volume with the number of workers.

By comparison, although KT's organisational structure has seemingly undergone some important changes, this has not affected its basic structure of local telecoms centres. Significant efforts from KT management to focus on differing customer segments and to rationalise various functions and operations has been hampered by the embeddedness of KT's local centres in the local community and centralised control over the organisation. Despite the recent endeavours of KT management to downsize the workforce and rationalise local telecoms centres, the degree to which KT has rationalised and consolidated its organisation has remained limited. The limited extent of the rationalisation and consolidation of KT management structure has affected the degree of work reorganisation in the areas of automating, measuring scheduling, rationalising, resourcing or controlling work.

From the summary, it can be deduced that there are similar developments in some

areas but more considerable discrepancies in relation to the major dimensions of work organisation between the two companies. The common patterns are found in BT's 'hard control' and KT's emerging 'hard control', work rationalisation in Customer Service Centres (CSCs), the increasing use of temporary workers, task and time flexibility and the significant size of downsizing, though the extent to which these work practices have been adopted varies between the two. Apart from these similarities, the two cases have revealed different tendencies in most aspects of work organisation. These are summed up in Table 10 below.

There is also another way of comparison: a comparison of work organisation in the field with that in CSCs or front-desks within each company. Very similar developments are to be found in most aspects of work organisation between the access side and clerical side in BT. The two areas of activities within BT have deployed work control systems which combine 'hard' and 'soft control' in performance management alike. Management has introduced similar types of job allocation and scheduling technologies (Work Manager and CTI) in both the field and CSCs and used those for similar purposes. Work rationalisation has been made in more or less similar ways, that is, via standardisations of work methods or script, work pace (QTT, CHT), the use of work scheduling methods and virtual conveyor belts, and JIT resourcing. Customisation in the field and CSCs has displayed equivalent tendencies, for example, short lead times, punctuality and prioritisation in the field and high PCA, one-stop service provisions and differentiation in CSCs. Flexibilities in task, time and space are commonly found in both the field and CSCs.

Although both the access and clerical side display similar developments in small aspects of work organisation, there are significant differences in other aspects of work

organisation in BT. The density of control is much higher in CSCs than in the field, and control of work quality is emphasised in the field, while behavioural control is stressed in CSCs. Work in CSCs is highly rationalised and concentrated, whilst work in the field still remains substantial craft elements, despite automatic work scheduling and significant standardisation. There is a significant difference in external flexibility between the two.

Both the access and clerical side in KT have also demonstrated somewhat parallel developments in work organisation. Above all, work in the field and at front-desks in KT is compartmentalised by the local structure, although CSCs have begun to take over customer services functions from local telecoms centres whilst being integrated into a more centralised structure. Work in the field and at front-desks is not tightly controlled but largely left to self-directed employees. Work volume and therefore work pace in KT is not controlled by management but depends on the local situation. Work scheduling is not automated but is manually done in the field and at front-desks. The degree of work rationalisation is very low in both functions because of the local structure and the absence of work allocation technologies. However, work in CSCs is very rationalised because of the integration of the customer service function into big centres equipped with new technologies. Customisation in CSCs and in the field has remained similarly limited. Flexibility in task and time has been built in to the existing work system in both the field and CSCs. The use of temporary workers in the field is more widespread than in CSCs or at front-desks because many contractors became temporary workers with the internalisation of outsourced work. Apart from that, there are not big differences between in the field and at front-desks or in CSCs.

Similar developments in work organisation in field operations and CSCs in BT and

KT result from the same context and management strategies. Most differences in work organisation between the two functions in BT are largely due to the nature of work or technologies deployed, as discussed in chapter 8. For example, as work in the field is undertaken geographically dispersed and individually, there are inherent limitations to the density of work control and the degree of work rationalisation, compared with those in CSCs. The differences in external flexibility between the two functions in BT are due to a combination of such factors as gender composition, the disposability of the workforce and the relative strength of the clerical or engineering constituency of the union. Differences in work between CSCs, front-desks and the access side in KT are large due to whether new technologies have been introduced or not.

In brief, broadly similar developments in work organisation are observed in field operations and customer service functions in each company, reflecting 'company effects' which arise from the same contexts and management approach. There are some significant differences between the access and clerical side in each company but these differences are largely the outcomes of the different nature of work, differing work environments or the varying degree of deployment of new technologies between the two functions. This indicates that work organisation is likely to be influenced by social factors such as social contexts and management strategies at least as much as by technical ones including the nature of work and new technologies.

Overall, work systems in BT have been fundamentally restructured since 1990, whereas those in KT have shown a gradual evolution in the midst of maintaining the old ones. According to Noon and Blyton's (1997: 118-9) framework, work organisation in BT has been transformed from 'specialist work' (high discretion over a narrow range of work) into 'generalised work' (a wide range of prescribed tasks), while the direction of

change in work organisation in KT is not clear. Those differences may be conceptualised as distinct work systems: a 'lean service work system' in BT and a 'modestly rationalised semi-autonomous work system' in KT. Work systems in BT have been transformed from an inflexible, supplier-centred bureaucratic model based on self-direction and craft work into a lean service model flexible enough to provide customised services on the basis of JIT principles at least costs. Work systems in KT have evolved from a bureaucratic model towards a modestly rationalised semi-autonomous system with some commercial orientation.

Table 10 **Emerging service work systems in BT and KT**

	lean service work system in BT	modestly rationalised semi-autonomous work system in KT
Work control	a combination of 'hard' and 'soft control' over quantity & quality decreased workers' discretion	self-direction and craft control 'hard control' over quality of service
Rationalization	significantly rationalised work, the use of CTI and Work Manager	low degree of rationalisation partial introduction of CTI
service delivery	one-stop, JIT services provision based on integrated automatic job scheduling systems	separate provision of services/ separate manual job scheduling systems
	proactively matching management structure	reactively matching management structure
Flexibility	high task, time, spatial flexibility high external flexibility	some task, time flexibility external flexibility
staffing	low staffing levels	low staffing levels

Now we have the major task of having to explain why the two companies have shown small similarities and more systematic divergences in work organisation in the face of the similar global pressures. The explanations will be sought by looking at the relationships between work organisation, national systems and other variables, and how they interact each other.

10.2. Explanations of Similarities and Divergences of Work Organisation

10.2.1. Explanations of Commonalities of Work Organisation

In attempting to explain some of the common trends identified in the above section some of the similarities found, may arise from increasingly competitive markets in both countries. Although competitive pressures may be different from each other, depending on national governance regimes, the multilateral WTO telecoms agreements concluded in February 1997 have forced each country to open its markets within certain time limits. The growing exposure of telecoms markets to competition has, even if the degrees vary between the countries, pressured both companies to seek cost reductions and improvements in service quality. In response to the changed external environments, the two companies have restructured and rationalised their management structure and operations to varying degrees. 'Hard control' over quality of services in both firms may reflect the imperatives of providing quality of services. The wide use of the non-standard workforce and downsizing are common responses deployed by the two companies in order to help minimise costs. Common packaged call centre technologies (e.g. CTI) have helped to bring in similar work rationalisation in CSCs in both BT and KT. As Katz (1997: 4-5) argued, differing from other manufacturing industries, particularly the car industry, this sector has not seen a 'best practice' model to be emulated by other firms. New technologies and increasing competitive pressures following globalisation and market opening are the two major forces of having led the two companies to converge in terms of work organisation.

However, seemingly common patterns of developments between the two companies may have resulted from different backgrounds and have varying significances for each

case. For example, 'hard control' commonly found in the two companies comes from different contexts. 'Hard control' in BT has arisen from tight performance management in order to reduce costs and boost productivity as well as the need to provide quality of services. By comparison 'hard control' in KT does not appear to stem from performance management but rather from KT management's efforts to change corporate culture. Task flexibility and time flexibility common in the two can also be said to result from disparate contexts. Task flexibility in BT has been pursued as a means of removing job demarcations between different groups of workers in order to cut costs and provide convenient services, and time flexibility has been brought in to cover services for extended hours. Task flexibility and time flexibility in KT have been in existence for a long time being part of built-in practices of the existing work system as a result of management prerogatives. Downsizing in BT is the results of the systematic efforts to modernise the network, to deploy cheap labour in simple tasks, to rationalise the corporate structure and work processes and to increase productivity under cost minimisation strategies. KT's effort to downsize was prompted by the financial crisis in 1997 without much rationalisation of business processes or work. The significance of redundancies for workers in Korea is very different from that for British workers. Since there have been few social security benefits as opposed to the various corporate welfare arrangements are linked to firms in Korea, the losing of employment would mean losing everything. Therefore, Korean unions tend to be strongly resistant to redundancies and employers are often cautious about making their employees redundant. BT, however, made their employees redundant much easier and with less resistance while it was making considerable profits.

What these apparently similar work or employment practices that actually arise from

different contexts or paths suggest is that similar phenomena may have different significances or implications for firms and workers, depending on contexts from which the practices come. This awakens us about the importance of the process-centred approach to industrial relations research. It illustrates the potential dangers for the outcome-oriented, often survey-based, approach which may lose sight of important differences in contexts of similar phenomena. Cully et al.(1999: 42 - 4) echo these dangers by showing how diversely and confusingly the concept of teamworking is used when 65 percent of workplaces where most employees worked in team drops down to just 3 percent of workplaces where teams corresponded in full to the model of autonomous teamworking. This insight into research methodology suggests that there is a great need to look in the 'black box' where independent variables are leading to dependent variables and to know exactly the internal working or processes of the black box. It also flags up the necessity to look at not only outcomes but also processes and contexts in the course of industrial relations research. Thus industrial relations research should be designed to grasp the whole of work structure as continuously evolving processes rather than to catch certain snapshot outcomes of work organisation in a certain moment. In this regard ostensibly similar patterns of work organisation between countries can be explained and dissimilar work organisation issues between countries can be analytically compared in their contexts. This supports Locke and Thelen's (1995) argument for contextualised cross-country comparisons by looking at changing processes and how intermediate variables work in those processes.

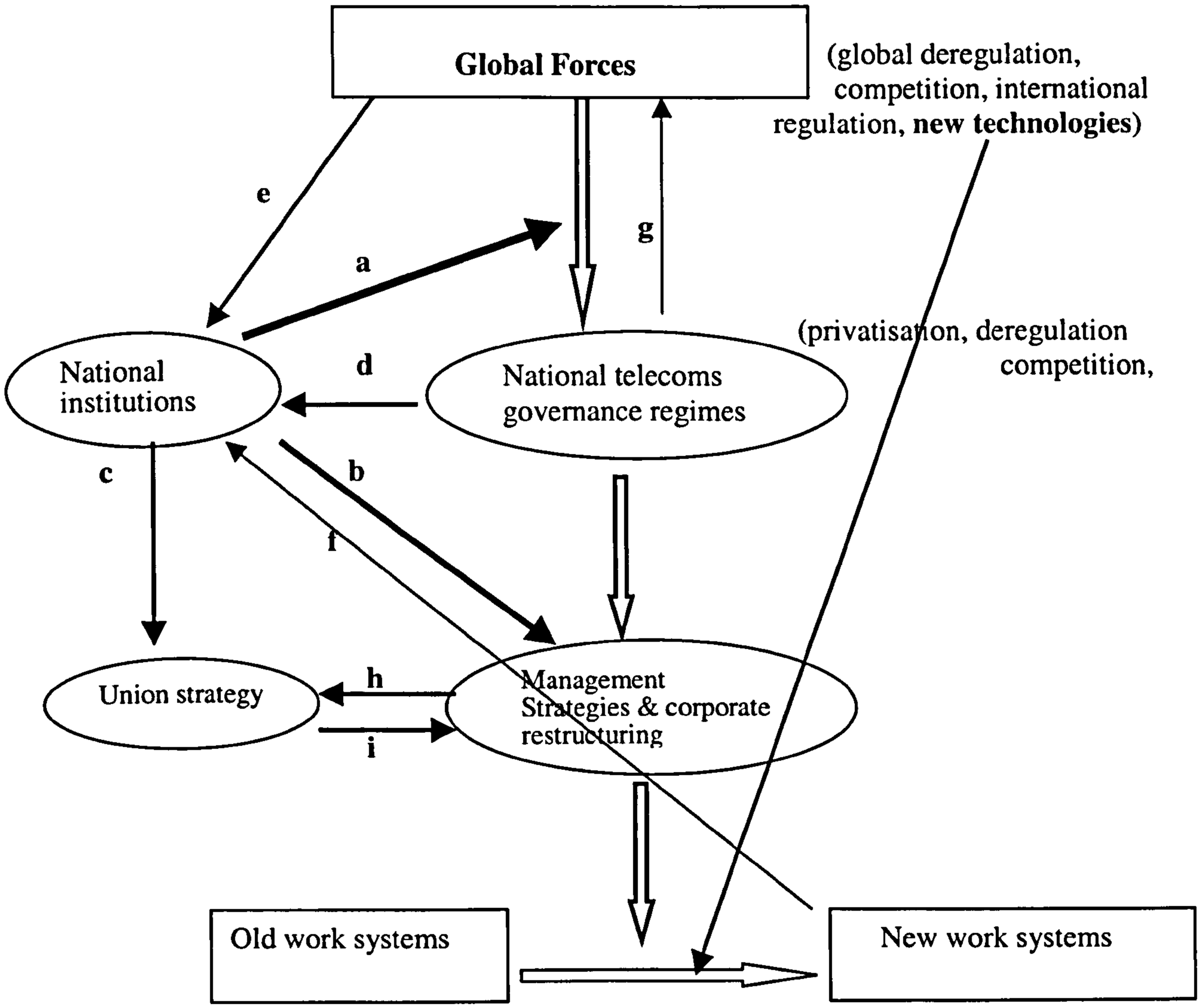
10.2.2. Explanations of Divergent Work Organisation

While each dimension of work organisation was examined in chapter 7-9, it has

become clear that work organisation issues are not purely technical or free from contexts. The systematic differences in patterns of work reorganisation between the two cases cannot be properly explained by linking a couple of direct or indirect variables because they are found to be closely associated with other contextual factors, such as national institutions, sectoral governance regimes, the existing structure of the companies or major actors' strategies. There is a need to contextualise reforms in work systems in order to explain divergent outcomes of work organisation. Drawing on the discussion on national institutions in chapter 4 and changing telecoms governance regimes in chapter 5, we can simplify the relationships between variables in the telecoms industry and draw a diagram showing how global forces lead to changes in work organisation. Relying on this diagram below, we can identify why divergent consequences have come into existence, and by what mechanisms. The direction of arrows points to the direction of influences or forces and the thickness of arrow denotes the degree of strength of influences or forces.

Divergence in work organisation between the two companies can be traced back to a number of causes which are themselves linked to, but can be analytically separated from, each other. We can easily point out the differences in phases of transformation in national telecoms governance regimes between the two countries and their subsequent corporate restructuring between the two cases in accounting for divergence of work organisation. The timing of privatisation, market opening, and deregulation tends to determine the speed and degree of development in competition in domestic markets which in turn directly or indirectly affect the degree or direction of corporate restructuring and work restructuring.

Figure 10. **Interactive processes of work restructuring**



Note: The three arrows from global forces to national telecoms governance regimes and from the latter to management strategies and from management strategies to work systems have no labelling because those arrows are already assumed to exist.

For example, the early privatisation of BT and market deregulation have led BT to be a market leader or pattern-setter in corporate restructuring and work reorganisation. The timing of the introduction of new technologies has significant impacts on corporate restructuring and work organisation. The introduction of CSS (Customer Services System) speeded up computerisation of service work and customisation of services in BT, while the failure to introduce ICIS (KT's equivalent of CSS) has further dampened

KT's efforts to computerise and rationalise clerical work and to customise services. Some divergence of work organisation may be explained by these gaps in phases. This explanation assumes that the laggard-like KT will eventually follow a similar path taken by leaders or pattern-setters such as BT and that work organisation may converge on that of leaders.

However, there are important caveats to relatively simple phase-difference explanations. Differences in phases may be not only dependent on timing but also due to political, social or organisational factors. For example, the timing of privatisation and market deregulation is not a simple time matter but related to political or other national factors. When and how to privatise public telecoms monopolies and deregulate the telecoms market, may depend upon the responses of national institutions such as political systems to global structural forces. The privatisation of BT was politically motivated by the Thatcher government in order to reduce the role of the state and the power of trade unions. The underdevelopment of the stock market in Korea prevented the Korean government from privatising KT as early as 1993-4. The speed and ways of corporate restructuring may also be influenced by national industrial relations arrangements and organisational factors. The constant pressures from the City of London have driven BT to radically restructure and rationalise its management structure and operations to reduce costs and to improve efficiency, whereas the restrictive labour law and life-time employment in Korea barred KT from undertaking radical corporate restructuring. Thus, our search for the sources of many differences in work organisation should move to an analysis of the influences of national institutions on work organisation. The influence of national institutions on work organisation may be exercised through the following three mechanisms.

Firstly, divergent outcomes in work organisation between the two cases may be explained by the influence of national systems through mediation in the processes of changes in telecoms governance regimes, as discussed in chapter 5. Four global forces are underlying sources that have driven changes in work organisation, although they themselves are partly the outcomes of the deregulation of the telecoms industry in various countries (arrow 'g' in the diagram), especially in the USA and the UK. The global forces are similarly pressing on each country to adopt new technologies, to deregulate markets, to compete with others and to comply with international regulation. These pressures are not directly transmitted to domestic telecoms operators. The global pressures are mediated by, and interact with, national political systems, financial systems or industrial relations system (arrow 'a' in the diagram). The outcomes of these interactions or mediations are the transformation of the former public monopoly model into new national telecoms governance regimes. Thus Britain adopted more market-oriented regimes by privatising BT earlier, deregulating markets, introducing competition and establishing regulatory framework. Korea took the state-led slow reform of the existing public monopoly regime. How national institutions in Britain and Korea have led to differing governance regimes and what the governance regimes of the two countries are like, were discussed in chapter 4-5. These differences in telecoms governance regimes between the two countries have put competitive pressures on managements in the two companies to reform work organisation in varying ways or degrees. Managements in the two cases have been constrained or encouraged to do or not to do things in various directions or ways. For example, earlier market opening and high competitive pressures in the UK forced BT management to undertake more radical corporate restructuring and to reform work organisation in order to significantly reduce

costs and provide quality of service. Gradual developments in competition in Korea have left KT management to respond in incremental ways of reforming management structure and work organisation.

Secondly, another source of differences may be found in the mechanism of influence of national systems on work organisation through their role in shaping management strategies, corporate structure, management values and norms and labour-management relations (arrow 'b' in the diagram). As discussed earlier in chapter 4, the financial system in the UK has strongly influenced BT management in that BT management is forced to be very sensitive to share prices and the demands of the City of London. Strong shareholders' expectation of high short-term profitability has been an important factor in BT management's pursuit of aggressive cost reductions. BT management has been less constrained in undertaking radical corporate restructuring because labour relations are lightly regulated in legal terms. Embedded liberalism, and developed market mechanisms, combined with the Conservative government and declining union influence, aided BT management in gradually getting rid of the legacies of public enterprise. BT management's cost minimisation strategies have focused on reductions in labour costs and their related rationalisation from the early 1990s onwards.

The leading role of the state in economic growth and management in Korea has greatly affected management in strategy formulation or implementation as a whole. KT management had largely done what the state had wanted it to do until the early 1990s. Rapid economic growth in Korea since the mid-1960s gave birth to growth-oriented business strategies, which made management pay little attention to corporate restructuring or cost minimisation, although the pursuit of those strategies was one of the main causes of the financial crisis in 1997. The domination of authoritarian military

government for more than 30 years had led to the militarisation of the society and the centralisation of decision-making structure in firms. Development in organisation-based employment systems and the poor social security system helped firms retain skilled labour and foster internal labour markets but has made it difficult for firms to restructure themselves in the face of recession or crisis. Moreover, the status of KT as a public enterprise has further shackled KT management in its pursuit of more rigorous commercial strategies. Thanks to these institutional arrangements, KT management have significantly been limited in its strategies, corporate restructuring and consequently work restructuring. With the development of market competition, the financial crisis in 1997, the ongoing privatisation and the government imposition on KT to reform, KT management has increasingly been forced to pursue a more commercial approach to its businesses.

Thirdly, work is reorganised differently in the two companies because of management's varying relations with unions (arrows 'h' and 'i' in the diagram). Unions may play a part in forming management strategy and corporate restructuring. When the union recognised by BT faced radical corporate restructuring, it did not have strong means of constraining BT management or strategically intervening in corporate restructuring, apart from direct industrial action or pragmatic acceptance of corporate restructuring. Moreover, the union based on occupational unionism has shown its interest in distribution and job control issues, but has not formulated any proactive proposal on work organisation issues. The union's strategy of 'negotiated change' does not appear to have influenced management strategies but sometimes slowed down the speed of corporate restructuring or modified some aspects of work restructuring in workers' favour. In contrast, high levels of legal regulation and repression of union

activities in Korea have brought about independent militant unionism with the democratisation of the society since 1987. The leadership of the KTTU which was newly elected in 1993, was imbued with this unionism which tends to oppose any form of corporate restructuring. KT management's unilateral decision-making style has merely made things worse. The KTTU has opposed most corporate restructuring in KT but surprisingly shown little interest in work organisation. In brief, the CWU's cooperation with BT has facilitated a smoother corporate restructuring once the union agreed, while the KTTU's conflictual relationship with KT management has often blocked, or slowed down, corporate restructuring.

Apart from the influences of national institutions on work organisation between the two countries, there are other explanatory factors for differing ways of reorganising work. One broad and organisational factor is the disparate trajectories of the two companies as organisational factors. It includes a number of elements, such as the existing management structure, decisions made in the past, personnel arrangements, working practices and institutional inertia or legacies. These elements inherited from the past have tended to limit the range of options for management to take or to make it difficult for management to restructure its organisation or work. The structure of local telecoms centres upon which KT is based, is so embedded in the local community that KT management has had difficulty in rationalising and restructuring business processes and subsequently in restructuring work. It took BT more than seven years after privatisation to transform traditionally regionally-based structure into divisional one. The hierarchical structure of centralised authority and bureaucratic culture which was firmly established with the militarisation of the society after the 1960s onwards, has remained strong within KT and has been a major obstacle to the reforms of management

structure and practices.

The grading structure in BT as a legacy of the public sector which is associated with job control or responsibility of each grade, has demonstrated great persistence. Although traditional job control has been eased through the implementation of task flexibility in BT, the existing grading arrangements have shown a considerable inertia. As the grading arrangements have remained the stickiest or most explosive issues in the two firms, managements have not been able to reform them easily. These issues often have blocked or delayed the introduction of the more flexible use of labour in BT. As the grading structure in KT is not associated with job responsibility but linked to status in the organisational hierarchy, it has not barred KT management from deploying labour flexibly but has raised another problem with the heavy hierarchy of management structure. BT is about to overhaul decades-old grading structure through protracted negotiations with the union, reflecting skill requirements and rewards. Even if KT has been caught up with the heavy hierarchical grading structure, KT management was not able to reform its grading structure but has taken a passive and incremental approach such as the freezing of the recruitment of unnecessary grades and waiting for them to die away over time. The persistence of grading arrangements and their different relationships with job control or responsibility may lead to the different reorganisation of work in the two companies.

The late modernisation of the BT network, especially exchanges as a result of management investment strategy led BT management to keep high staffing levels until the early 1990s. Apart from competitive pressures, this high staffing level, the high proportion of labour costs out of operating costs and the completion of network upgrading provided BT management with strong motives to lower costs through large-

scale downsizing and radical work rationalisation. Low price policies imposed on KT by the military government to curb inflation in the 1980s led KT management to keep staffing levels low. The low staffing level, coupled with the expansion of the modern network in the 1980s requiring less maintenance and repair work, has provided KT management with little incentive to make efforts to cut costs through downsizing and work rationalisation.

The existing industrial relations plays a part in accounting for differences in work organisation between the two cases. The long tradition of cooperative industrial relations and the strong presence of the unions in BT (well over 80% of employees are union members) have influenced BT management in certain ways. Although BT management has taken time in negotiating with, or met opposition from, the union over reforming organisational structure or introducing new working practices, it has been able to secure legitimacy for its plans and cooperation among workers once agreements are reached. This may have facilitated BT management to implement corporate restructuring and work reorganisation more smoothly than otherwise. However, frequent interventions of the state in labour-management relations in enterprises including KT, and employers' hostile attitude towards unions in Korea have tended to drive labour-management relations in enterprises to become antagonistic. As the new union leadership of KTTU from 1993 onwards challenged the authoritarian attitude of KT management and the guidelines in pay negotiation in the public sector which were designed to keep wage increases low by the government, labour relations in KT became confrontational. This confrontational atmosphere has stood in the way of corporate restructuring and work reorganisation. In brief, as corporate restructuring and the reorganisation of work are significantly path-dependent, work organisation between BT

and KT diverges.

Another important factor, management may make differences in work organisation between the two operators. Management in the two has not remained passive actors merely following the logic or directions imposed or dictated by national institutions or competitive pressures but may actually have been more or less proactive in pursuing its objectives or strategies. Although bounded or constrained to a significant extent, management may have some strategic choices to make within certain limits. Room for management to manoeuvre might gradually increase as globalisation is claimed to reduce the influence of national institutions. However, the degree to which management possess autonomy should be balanced by the extent to which management is constrained by the various influences of national systems or imperatives of global forces, which is not an easy task.

BT management has taken full advantage of the economies of scale available in corporate restructuring and work restructuring, while KT management has not made much effort to utilise such economies of scale. Although BT and KT introduced similar call centre technologies such as CTI, BT management has used them for control purposes, whilst KT management has not. This discrepancy may significantly reflect the fact that BT management has been under strong pressure to transform the former public monopoly into more efficient operation able to generate short-term profits, whereas the pressures on KT management have not been so strong. However, this kind of explanation of the differences in work organisation is not sufficient. For example, BT management has taken initiatives to invent and upgrade the Work Manager (WM) technologies in the processes of work rationalisation by asking its research centre to come up with an automatic work scheduling system. Differing from call centre

technologies which were imported from outside, the WM is BT management's own work, initiated by BT management. Likewise, Customer Services System (CSS) was also created under the initiatives of BT management. CSS has significantly contributed to work rationalisation and customisation in CSCs in BT. There have been unsuccessful but ongoing initiatives of developing more or less similar systems such as ICIS (Integrated Customer Information System) and RIMS (Repair and Installation Management System) in KT. These management initiatives, which are not dictated by contextual factors, may be one of the important causes for different work organisation between BT and KT.

Overall, *systematic differences found in work organisation between BT and KT seem to originate from variant influences of national institutions on telecoms governance regimes, management and unions and on trajectories that the two companies have trodden and the inertia from them, or disparate management strategies or initiatives towards corporate restructuring and new technologies.* Small similarities observed arise from structural forces with a global nature. Apparently similar trends actually may arise from quite different contexts for different purposes. In this regard how work is reorganised is largely dependent upon contexts such as national systems and their related intermediate variables in the telecoms services industry. Empirical evidence gives little support to convergence of work organisation between the two cases in the telecommunications services industry. Work organisation diverges cross-nationally.

10.3. Theoretical Implications

The findings that work organisation in the telecommunications services industry diverges cross-nationally may have important theoretical implications for convergence

debate. Womack et al's (1990) argument for the convergence on 'lean production' systems is rejected by this study. Even if lean production principles are associated with efficiency in production, work is reorganised according to the requirements of national systems, the path each company has trodden (structure, decisions, and practices) and management or union strategies as well as the imperatives of global competitive pressures. There is no inexorable force driving work organisation to converge on the terms of the lean production or best practice model. The transferability of working practices across borders is also questioned because work organisation issues are closely influenced by contextual factors. When work practices are imported to foreign environments, they are more likely to be modified or adjusted so as to accommodate the requirements of new settings. If work practices are successfully transferred, it would be limited to transplants of the same multinationals in foreign countries, probably in the car industry. Although BT is a leader in the telecommunications services industry in terms of its successful transformation from a former public monopoly into a blue-chip private company and KT management wanted to learn from BT's experience, there is no significant example of work organisation or management practices in KT which emulated those in BT. BT management has picked and chosen some lean production principles such as elements of JIT, minimal slack, the maximum use of the workforce and work rationalisation but deserted others such as teamworking, employee involvement, and supporting human resource management practices. What BT management has achieved is a rationalised 'lean service' system, very different from Womack et al's 'lean production' model.

This line of reasoning might lead to the similar conclusion to institutionalism about convergence versus divergence. However, the ways in which national systems affect

the processes of reorganising work are more complex than conventional institutionalism suggests. The processes of mediation by a number of intermediate variables are not straightforward but involve multi-level 'dynamic interactions' between intermediate variables. For instance, management strategies which have driven work organisation, are not only influenced by national institutions but also constrained by national telecoms governance regimes. Corporate restructuring which directly or indirectly affects the reorganisation of work, is guided by management strategies but subject to the inertia of old management structures or decisions made in the past. Various dimensions of corporate restructuring affect each other and together contribute to the reorganisation of work. That is, rationalisation and consolidation lead to downsizing and relocation, and vice versa, all of which have resulted in work reorganisation in a more profound way. Union policies towards work reorganisation are not only moulded by national industrial relations systems but also influenced by the history of labour management relations at the firm level and management strategies. Even different aspects of work organisation impinge on each other. These processes of complex and dynamic intermediation processes are not well addressed by conventional institutionalism. In order to capture these processes, we examined the processes of how intermediate variables work and interact with other variables in each process through in-depth qualitative researches.

Another aspect of 'dynamic interactions' may make the current discussion distinct from conventional institutionalism. Although the 'societal effects' school underscores interdependence among various sub-systems or elements of national systems, influences of national systems on firms' behaviour including work organisation is unidirectional. National institutions are supposed to remain persistent despite significant changes in

external environments. This static model of institutionalism may not reflect the reality, especially in the period of significant changes in external environments. As we can see, interactions between different variables in the figure 10, their relationships are not unilateral or unidirectional. The directions of influences of those intermediate variables are both ways, though asymmetrical.

Now we will look at how and by what mechanisms the relationships between variables may bring about dynamic interactions. National institutions have mediated global structural forces and have remoulded national telecoms governance regimes from protected public monopolies towards (partly) privatised companies under competitive conditions. National telecoms governance frameworks are an important interface between national institutions and global/structural forces based on sectoral/ technological conditions. These governance regimes may be a compromise between national systems and sectoral and technological imperatives. These regimes also constitute an element of national institutional arrangements. National systems which were established many years ago, are implicitly based on a balance between the competitive and protected sector, and between the private and public sector. These new telecoms governance regimes have contributed to an alteration in the proportional balance between the competitive private sector and the protected public sector towards the former. Moreover, as global forces grow, telecoms governance regimes in countries, though the degree and speed of move varies between countries, tend to move to privatisation, competition and the establishment of similar regulatory framework in the telecoms industry so as to accommodate the spread of technological innovation within the sectors, the establishment of common rules across countries and competitive conditions. Similar changes in other sectors such as electricity and gas may give birth

to significant changes in the balance, which may in turns result in some institutional reconfiguration. Thus new telecoms governance regimes may influence national systems in a reverse way (arrow 'd' in the diagram in Figure 10), which may become an important conduit for institutional dynamism.

Another source of dynamic interactions between variables may be found in substantive changes in the workplace that often lie hidden under ostensibly strong and formal institutions. There may be many occasions where there have been substantive changes, for example, in production systems, whereas formal procedures of industrial relations have remained relatively intact. The changes may have been achieved through stable plant-level structures of union representation and negotiation. BT may be one of these cases. While corporate industrial relations arrangements such as collective bargaining and consultation, although they are also subject to changes in favour of management, have remained relatively stable, work organisation has undergone a transformation from an old system based on public monopoly to a rationalised 'lean service' system. Institutionalist perspectives may often be unable to recognise these qualitative structural changes behind the surface of institutional continuities (Terry 1989). The discrepancies between the apparent continuity of procedural institutions and increasing substantive flexibility underneath 'will pose long-term threats to the robustness of institutions' (Ferner and Hyman 1998, xxiv). These mismatches are compared to "shells being made hollow". These substantive changes underneath apparently robust institutional continuities may provide an important source of changes in national industrial relations systems. That is, work reorganisation may eventually affect national institutions in a dynamic way (the arrow 'f' in the diagram in Figure 10). It acts as a reverse way of influence on national institutions. These reverse influences

may make the processes of changes rather more interactive between variables. These dynamic interactions between variables may differ from the existing institutionalism which explains convergence between countries by unidirectional influences of national systems on industrial relations outcomes.

The identification of those dynamic interactions between variables marks a theoretical development from the book, Telecommunications edited by Katz (1997), as well as the existing national institution theory, by recognising the ways in which national institutions may undergo changes or be influenced by other variables. Critically reviewing the limitations of simplified dichotomy in management industrial relations strategies between 'direct control' and 'responsible autonomy', between high and low trust, or between high commitment and work intensification, the thesis identifies variations within a low trust strategy, and conceptualises them into hard control and soft control. By identifying management sub-strategies (hard control and soft control) within low trust strategies in relations to work control, it addresses fundamental inconsistencies in the telecoms sector, raised by Katz (1997:5), which arise from the incompatibility between cost-cutting and employee participation strategies. We have thus made two advances. First, we have given a more dynamic and interactive account than that offered by Katz. Second, we have shown that cost-cutting and participation need not be, as Katz argued, alternatives.

Millward et al (2000: 234) argues for a transformation in the British industrial relations systems based on 1998 Workplace Employee Relations Surveys (WERS). It is a different verdict from the conclusions from the earlier WIRS (Workplace Industrial Relations Surveys). The sources of the transformation in British industrial relations systems are sought in changes in procedural arrangements such as collective bargaining

but not in substantive issues. However, the answer to seeking the sources of the transformation is not only in procedural issues but also in substantive matters. These two reverse influences, especially of work reorganisation on national institutions discussed above, may partly be an important source of a transformation in the British industrial relations systems. This reminds us of the necessity to simultaneously look at procedural arrangements and substantive matters in examining national industrial relations systems. The need for a perspective integrating procedural and substantive matters in investigating industrial relations, has to be underlined in order to correct the procedural biases of the existing institutional industrial relations theories.

Apart from a need to focus on substantive issues in industrial relations research, the thesis finds two further needs with methodological implications. When we make cross-country studies, we need to make contextualised comparisons because apparently similar phenomena or issues have different meanings or backgrounds, which is detailed in the previous section. We should also look at social processes involved in work restructuring rather than just to focus on outcomes in industrial relations research in order to uncover how and why work is reorganised. These findings which require industrial relations researchers to stress substantive issues, processes and contextualised comparisons, will make qualitative industrial relations research more fruitful than otherwise.

This thesis has captured these processes by looking at possible intermediate variables and examining how they mediate and structure the processes of changes and transmission of competitive forces by these intermediate variables from global level to workplace level. This revealed how similar global forces eventually lead to different ways of reorganising work between countries in the processes of dynamic interactions

between variables. This process-led approach provides an important analytical insight into an explanation of convergence versus divergence in a new way.

10.4. Research Limitations and the Direction of Future Research

The current research has been conducted within a definite time scale and is subject to some limitations in research methodology and scope. As we selected the two cases in the two countries, it is very difficult to disentangle 'company effects', 'industry effects' from 'country effects'. The research is focused on developments in the field and CSCs, both of which are more service-led labour-intensive parts of the organizations. If we had looked at more technology-intensive parts, business-customers serving parts, or sales parts of the organisations, we might have got somewhat different pictures. The issues we seek to address here are limited to certain aspects of work organisation. If the research had encompassed other industrial relations issues or human resource management issues, the outcomes of the research would have been richer and complete.

In relation to the direction of future research, most research, including the current study, have explicitly or implicitly assumed that national institutions or systems remain stable over the years, once they are established. National institutionalists in their cross-national research have been largely interested in how national institutions structure or shape country-specific features in organisation and work relations. The assumption could be well applied in the period of relative stability from 1945 into the 1970s in the western world. However, the assumption may go wrong when the period of relative stability ended and important changes in external environments started in the 1980s and 1990s. Although some scholars (Mayer and Whittington 1999) argue for 'loose'

national systems against 'tight' ones that are flexible enough to accommodate various organisational changes and industrial relations changes and to endure inconsistent or sometimes contradictory phenomena, some parts of national systems are unravelling or have altered over the years. What will happen to work and employment relations if national institutions themselves are subject to changes? This question is rarely considered in theoretical frameworks in industrial relations research. Taking into account profound changes in external environments, we need to integrate the dynamics arising from these changes into theoretical frameworks and develop a view which incorporates institutional dynamics which would replace the current 'static' institutionalism.

We are able to identify the two sources of dynamic interactions between variables in the previous section. These two can be the sources of institutional dynamism. Future research needs to examine not only how national systems affect and shape work and employment relations but also how national systems are subject to changes or affected by other variables in fast changing environments. These interactive dynamics may constitute institutional dynamism, distinct from 'static institutionalism'. Apart from these, there may be two main sources of institutional dynamism - exogenous and endogenous. Addressing this dynamism, we can deal with the debate on convergence versus divergence in a more complete way and within a globalising context.

Institutional dynamism may arise from a number of exogenous sources. Firstly, the rise of the so-called 'new economy' related to information technology may shake the existing national systems associated with the 'old economy' by outpacing the speed of growth and inducing huge investment in the new economy. Their activities are much less likely to be influenced by the existing institutional framework because they are

mostly entrepreneurial and have few legacies of the past. The telecommunications services industry is an important part of the new economy. Secondly, another institutional change may stem from the globalisation and mobility of financial capital. The changes in national financial systems may prompt the fabric of national business systems to unravel by changing the relationships between banks and industry and altering corporate governance regimes. Thirdly, the identification of distinct national models by institutionalists and subsequent 'regime competition' (Streeck 1992b; Whitley 1992: 250-1), may lead to various attempts to adopt superior models but may eventually result in an institutional evolution through adaptations or hybridisation. This is an important way in which dynamism operates around national institutions. Fourthly, as an endogenous source of institutional dynamism one important development in national industrial relations institutions is the decentralisation of collective bargaining and the decline in macro-national concertation in many countries in the 1980s and 1990 (Hassel 1999; Katz and Darbishire 1999). This decentralised bargaining has also brought an enterprise-focus of IR decision-making or strategy into focus (Locke 1995a, 12: Regini 1995, 71-84). The secular decline in union density and influence during the 1980s and 1990s has helped management gain the upper hand in bargaining power. Lastly, existing national institutions may function differently in a new global environment. For example, enterprise unions in Korea that had been a conduit for management control over workers under the military governments have become an effective means for workers to promote their objectives in a newly democratised society. The Japanese financial systems which were thought of as providing Japan with industrial competitiveness, are now regarded as becoming a culprit of the Japanese economic troubles in the latter half of the 1990s.

In the existing institutionalist literature, national institutions are regarded as functioning like catalysts in chemistry. However, the social world is different from the natural world in that society itself changes and is also formed in the processes of interaction between its various forces. Institutional dynamism may make interactions between global forces, national institutions, management, unions and work/employment relations more dynamic and complex. Institutional dynamism which integrates social structuring of industrial relations by national systems with these institutional changes, may provide us with a tool whereby we can adopt an approach to comparative analyses which differs from static institutional approaches. It will make it possible for IR researchers to draw a more complete picture of the interaction in a world undergoing significant environmental changes. This task is left to future research.

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